APPELLANT'S BRIEF

No. 2011-1301

IN THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

CLS BANK INTERNATIONAL,

Plaintiff-Appellee,

and

CLS SERVICES LTD.,

Counterclaim-Defendant Appellee,

v.

ALICE CORPORATION PTY. LTD.,

Defendant-Appellant.

Appeal from the United States District Court for the District of Columbia in Case No. 07-CV-0974, Judge Rosemary M. Collyer

BRIEF OF DEFENDANT-APPELLANT ALICE CORPORATION PTY. LTD.

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CERTIFICATE OF INTEREST

Pursuant to Federal Circuit Rule 47.4, undersigned counsel for Defendant-Appellant certifies the following:

1. The full name of every party or amicus represented by me is Alice Corporation Pty. Ltd.

2. The name of the real party in interest represented by me is the same.

3. All parent corporations and any publicly held companies that own 10 percent of more of the stock of the party or amicus curiae represented by me are: National Australia Bank Ltd.

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June 24, 2011

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STATEMENT OF RELATED CASES

An appeal from the same civil action was previously before this Court. On October 13, 2009, the district court, on motion of Plaintiff CLS Bank International and Counterclaim-Defendant CLS Services Ltd., certified for interlocutory appeal under 28 U.S.C. § 1292(b) an infringement issue unrelated to the current appeal. This Court denied the petition for interlocutory appeal on February 2, 2010, in *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, No. 2010-M922, 411 F. App'x 306 (Fed. Cir. 2010) (Mayer, Bryson, Dyk, JJ.). Counsel for Defendant-Appellant are not aware of any other case pending in this or any other court that will directly affect or be directly affected by this Court's decision in this appeal.

JURISDICTIONAL STATEMENT

Jurisdiction was proper in the district court pursuant to 28 U.S.C. §§ 1331 and 1338(a). The district court entered final judgment for CLS Bank International and CLS Services Ltd. (collectively, "CLS") on March 9, 2011, and Alice Corporation Pty. Ltd. ("Alice") timely filed its notice of appeal on March 18, 2011. Appellate jurisdiction is proper in this Court pursuant to 28 U.S.C. § 1295(a)(1).

STATEMENT OF THE ISSUE

Whether the district court erred in holding that Alice's asserted patent claims to computer systems, computer program products, and methods of using computer systems are directed to nothing more than abstract ideas and therefore invalid under 35 U.S.C. § 101.

STATEMENT OF THE CASE

I.   INTRODUCTION

This is an appeal from a grant of summary judgment that invalidated claims

of four patents under 35 U.S.C. § 101. Alice owns U.S. Patent Nos. 5,970,479

("the '479 patent"), 6,912,510 ("the '510 patent"), 7,149,720 ("the '720 patent"),

and 7,725,375 ("the '375 patent"). The '720 and '375 patents claim computer

systems that are configured to execute exchanges—such as of currencies—between

two parties in a particular way that minimizes the risk that only one party will

complete its half of the exchange. The '375 patent also claims "computer program

products"—*i.e.*, computer storage media such as disk drives—containing software

code to program the computer systems. The '479 and '510 patents claim methods

of using computer systems to execute the exchanges.

Neither this Court nor the Supreme Court has ever invalidated a claim to a

computer system under 35 U.S.C. § 101. Computer systems are "machines" and

are statutorily eligible subject matter. Nevertheless, relying on the Supreme

Court's decision in *Bilski v. Kappos*, 130 S. Ct. 3218 (2010), the district court

concluded that the "heart" of all of Alice's asserted claims was a single abstract

idea: the "abstract idea of employing an intermediary to facilitate simultaneous

exchange of obligations in order to minimize risk." JA37. The district court's

formulation of the "heart" of Alice's invention is far broader than any of Alice's

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claims, and more importantly, by basing its analysis on this supposed "heart," the court committed legal error. For purposes of 35 U.S.C. § 101, as is true under every other validity doctrine, the court must consider the invention as claimed, including all of the limitations of each claim, and may not set aside those limitations in search of the invention's "heart." *Diamond v. Diehr*, 450 U.S. 175, 188 (1981); *see also Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 345 (1961) ("[T]here is no legally recognizable or protected 'essential' element, 'gist' or 'heart' of the invention in a combination patent.").

Under the analysis employed by the district court, virtually any claim can be held to cover unpatentable subject matter, for virtually any claim can be reduced to a core idea, or "heart," that is in some sense "abstract." Computer-related and computer-implemented inventions are especially vulnerable, because the district court regarded computer-related limitations as particularly insignificant in the section 101 analysis. But nothing in the precedent of the Supreme Court or this Court supports that view. To be sure, claims to particular computers or particular uses of computers may be anticipated or obvious, or may lack definiteness or present other issues, but those are matters for analysis under sections 102, 103, and 112, not section 101.

Under section 101, the proper analysis of each of Alice's claims must begin with an inquiry into whether the claim describes a "machine," "manufacture,"

"composition of matter," or "process"—the four categories of subject matter that are statutorily patent-eligible. 35 U.S.C. § 101. If the claim is in a statutory category, the next question is whether any of the narrow judicially created exceptions to patent eligibility applies. Three such exceptions have been recognized by the Supreme Court for laws of nature, physical phenomena, and abstract ideas. *Bilski*, 130 S. Ct. at 3225. Only the third exception is relevant to this appeal, and it renders ineligible any claim that is directed to nothing more than an "abstract idea." This Court has made clear that this exception applies only in limited circumstances, as a claim's abstract nature must "exhibit itself so manifestly as to override the broad statutory categories" set out by Congress before it may be held invalid as drawn to abstract subject matter. *Research Corp. Techs. v. Microsoft Corp.*, 627 F.3d 859, 868 (Fed. Cir. 2010).

Alice has manifestly not claimed an "abstract idea," but rather a concrete and technological implementation of executing real-world exchanges in a particular, concrete way. Accordingly, each claim should have been upheld as claiming patentable subject matter, and the decision of the district court should be reversed.

II.   THE PROCEEDINGS BELOW

On May 24, 2007, CLS Bank International brought this action in the United States District Court for the District of Columbia seeking a declaratory judgment

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that its system for exchanging foreign currencies, and the use thereof, does not

infringe any of Alice's '479, '510, and '720 patents, and that those patents are

invalid and/or unenforceable. Alice counterclaimed, alleging that CLS infringes

the '479, '510, and '720 patents.

On May 25, 2010, the United States Patent and Trademark Office issued the

'375 patent. With consent of CLS and leave of the court, Alice amended its

counterclaims to allege infringement of the '375 patent.

CLS first moved for summary judgment based on a lack of patentable

subject matter in March 2009, and Alice cross-moved for partial summary

judgment that its patents claim patentable subject matter. The district court denied

the motions without prejudice, deferring the issue until the Supreme Court decided

Bilski, 130 S. Ct. at 3218.[1]

On August 27, 2010, CLS renewed its motion for summary judgment,

alleging invalidity for lack of patent-eligible subject matter. Alice cross-moved on

the issue of subject-matter eligibility. Because the district court had not yet

conducted claim construction proceedings, and the parties had taken only limited

discovery, the parties and the district court agreed that for purposes of deciding the

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[1] CLS also moved for summary judgment of non-infringement on grounds
unrelated to the present appeal. The district court denied that motion on the merits.
CLS Bank Int'l v. Alice Corp. Pty. Ltd., 667 F. Supp. 2d 29 (D.D.C. 2009).

section 101 motion, the court would assume claim constructions favorable to Alice. JA25.

The district court granted CLS's motion for summary judgment and denied Alice's cross-motion, holding that all asserted claims of Alice's four patents are invalid for lack of patentable subject matter. *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, ___ F. Supp. 2d ___, 2011 WL 802079 (D.D.C. Mar. 9, 2011). The district court entered final judgment in favor of CLS. Alice timely noticed this appeal.

STATEMENT OF FACTS

I.   THE TECHNOLOGY

In the early 1990s, Ian Shepherd, founder of Alice and formerly head of the Melbourne, Australia office of management consultant McKinsey & Company, Inc., conceived of a computerized system for the establishment, settlement, and administration of financial instruments, principally of basic derivatives, that would solve problems inherent in the way trading such instruments had been done in the past. Mr. Shepherd applied for a patent, which disclosed extensive technical information on how to build such a system, including how the computer systems would be connected and programmed. JA250.

From the beginning, Mr. Shepherd conceived of his system as a means of using computer technology in a particular manner to solve various problems with the ways that financial obligations had previously been created and exchanged.

JA251, 355–56. The aspect of the overall computerized trading system set forth in the asserted claims is an automated system for executing exchanges that two counterparties had agreed to make—that is, for actually carrying out a previously agreed-upon exchange of dollars for euros, yen for shares of stock, or even one type of contract for another. JA356, 1004–07.

This execution of an agreed-upon exchange, known in the financial world as "settlement," typically happens sometime after the parties' agreement to do the exchange, and carries with it the risk that one party will perform but the other party will not, a risk that could exceed the economic value of the transaction. For example, the expected profit from a currency exchange might be far less than the amount of money that one party would lose if it performed its half of the transaction (sending, for instance, its dollars) while its counterparty failed to perform (that is, not sending the agreed amount of euros in return). It is thus essential to both counterparties to the transaction that either both sides, or "legs," of the transaction be carried out, or that if something goes wrong, neither leg is carried out, to avoid one party losing the entire value of its principal. JA1004–05.

Mr. Shepherd realized that these risks could be mitigated or eliminated by carrying out the settlement electronically in a particular way that does not suffer "the shortcomings of existing risk management mechanisms." JA837. A computer system would electronically maintain accounts for each party (described in the

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claims as "first" and "third" accounts). These accounts would correspond to, but be independent from, "real-world" exchange accounts (described as "second" and "fourth" accounts in the claims) at an exchange institution (such as a central bank, in the case of currency trades). JA868 (*e.g.*, '375 patent, claim 14). Upon receiving a transaction from the user, and after ensuring that there was adequate value in each party's account, the computer would (in real time) adjust the accounts it maintained to effect the exchange. *Id.* (If either party's account lacked adequate value, the computer would not initiate the exchange.) Finally, sometime thereafter, the computer would generate an instruction to the exchange institution or institutions to carry out the transaction in their "real-world" accounts. *Id.* For example, in the case of currency settlements, the system might generate and send instructions to the U.S. Federal Reserve Bank and the European Central Bank to move dollars and euros to the parties' accounts with those central banks. *Id.*; JA1004–05.

Contrary to the characterization of the district court, Alice did *not* claim "the abstract idea of employing an intermediary to facilitate simultaneous exchange of obligations in order to minimize risk." *E.g.*, JA37. It claimed a particular way of executing an exchange, requiring a particular configuration of accounts and specific actions to be carried out by a computer system.

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II.   THE PATENTS-IN-SUIT

There are four patents-in-suit, which largely share a 100+ page specification describing in detail the trading platform that Mr. Shepherd invented. The relevant claims fall into three categories. The '375 and '720 patents claim computer systems configured to perform the exchanges discussed above. The '375 patent also claims computer program products (*i.e.*, computer-readable storage media) containing program code to perform the exchanges. As is relevant here, the '510 and '479 patents claim methods of performing the exchanges. Each patent claims priority to the same initial application.

A.   Computer System Claims

1.   The '375 Patent

Most of the claims of the '375 patent are directed to a "data processing system"—a machine, driven by a "computer," designed to execute the transactions recited in the claims. Specifically, Alice claims a machine comprising a "data storage unit" that stores information about several "accounts" or "records"; a "first party device" or "communications controller"; and a "computer, coupled to said data storage unit," configured to perform the steps necessary to effectuate the exchange of an obligation. Claim 14 is representative:

> 14. A **data processing system** to enable the exchange of an
> obligation between parties, the system comprising:
>   **a communications controller,**
>   **a data storage unit** having stored therein

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(a) information about a first account for a first party, independent from a second account maintained by a first exchange institution, and

(b) information about a third account for a second party, independent from a fourth account maintained by a second exchange institution; and

a computer, coupled to said data storage unit and said communications controller, that is configured to

(a) receive a transaction from said first party via said communications controller;

(b) electronically adjust said first account and said third account in order to effect an exchange obligation arising from said transaction between said first party and said second party after ensuring that said first party and/or said second party have adequate value in said first account and/or said third account, respectively; and

(c) generate an instruction to said first exchange institution and/or said second exchange institution to adjust said second account and/or said fourth account in accordance with the adjustment of said first account and/or said third account, wherein said instruction being an irrevocable, time invariant obligation placed on said first exchange institution and/or said second exchange institution.

JA868 (emphasis added).

The "communications controller" is a specific hardware component that allows communications over a wide-area computer network. JA1017 (¶ 54). The "data storage unit" is a specific component, such as a disk drive or file server, capable of storing data. JA1015, 1017 (¶¶ 48, 54). The "computer" is a computer that is coupled to the data storage unit and configured with software to manipulate the data on that data storage unit in a particular way in order to carry out the recited functions. JA1015–16 (¶¶ 47, 49).

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Each independent computer system claim of the '375 patent recites the

"communications controller" (and/or a "first party device"), "computer," and a

"data storage unit" required to run the system, and those terms are incorporated

into each dependent claim. Alice's claims recite specific computer system

hardware configured to perform a specific function, JA1015–18 (¶¶ 46–54, 56–58);

CLS has conceded that Alice's computer system claims in the '375 patent are

"tie[d] . . . to a machine." JA1303.

2.   The '720 Patent

Like the system claims of the '375 patent, all claims of the '720 patent are

directed to a "data processing system"—a machine comprising a "computer" and

"a data storage unit." For example, claim 68 of the '720 system patent reads:

> 68. A **data processing system** to enable the exchange of an
> obligation between parties, the system comprising:
> **a data storage unit** having stored therein
> (a) information about a first account for a first party,
> independent from a second account maintained by a first exchange
> institution,
> (b) information about a third account for a second party,
> independent from a fourth account maintained by a second exchange
> institution; and
> **a computer, coupled to said data storage unit**, that is
> configured to
> (a) receive a transaction;
> (b) electronically adjust said first account and said third account
> in order to effect an exchange obligation arising from said transaction
> between said first party and said second party after ensuring that said
> first party and/or said second party have adequate value in said first
> account and/or said third account, respectively; and

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(c) generate an instruction to said first exchange institution and/or said second exchange institution to adjust said second account and/or said fourth account in accordance with the adjustment of said first account and/or said third account, wherein said instruction being an irrevocable, time invariant obligation placed on said first exchange institution and/or said second exchange institution.

JA708 (emphasis added). These same components are incorporated into each dependent claim.

Like the claims of the '375 patent, the claims of the '720 patent are directed to a "machine," specifically to computer hardware. JA1015–18 (¶¶ 46–54, 56–58). CLS has conceded that Alice's computer system claims in the '720 patent are "tie[d] . . . to a machine." JA1303.

B.   Computer Program Product Claims

In addition to its machine claims, the '375 patent includes three claims directed to "computer program products"—computer-readable, physical storage media (*e.g.*, a disk) that store program code to perform Alice's claimed methods, using Alice's claimed computer systems.

Claim 39 is representative:

39. A **computer program product** comprising a **computer readable storage medium** having **computer readable program code embodied in the medium** for use by a party to exchange an obligation between a first party and a second party, the computer program product comprising:
program code for causing a **computer** to send a transaction from said first party relating to an exchange obligation arising from a currency exchange transaction between said first party and said second party; and

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> **program code** for causing a **computer** to allow viewing of information relating to processing, by a supervisory institution, of said exchange obligation, wherein said processing includes (1) maintaining information about a first account for the first party, independent from a second account maintained by a first exchange institution, and information about a third account for the second party, independent from a fourth account maintained by a second exchange institution; (2) electronically adjusting said first account and said third account, in order to effect an exchange obligation arising from said transaction between said first party and said second party, after ensuring that said first party and/or said second party have adequate value in said first account and/or said third account, respectively; and (3) generating an instruction to said first exchange institution and/or said second exchange institution to adjust said second account and/or said fourth account in accordance with the adjustment of said first account and/or said third account, wherein said instruction being an irrevocable, time invariant obligation placed on said first exchange institution and/or said second exchange institution.

JA869 (emphasis added). These product limitations are incorporated into each dependent claim. JA1017 (¶ 55).

C.   Method Claims

1.   The '510 Patent

Unlike the '375 and '720 patents, which expressly claim a machine (a "computer" and associated hardware) configured to perform the settlement transaction, the '510 patent is directed to the process of "electronically" performing the settlement transaction itself. JA1011–15 (¶¶ 34–45). As relevant to this appeal, claim 68 exemplifies the claims of the '510 patent:

> 68. A method of exchanging an obligation between parties, wherein an exchange obligation is administered by a supervisory

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institution, the method performed by the supervisory institution, comprising:

    maintaining a first account for a first party, independent from a second account maintained by a first exchange institution;

    maintaining a third account for a second party, independent from a fourth account maintained by a second exchange institution;

    electronically adjusting said first account and said third account in order to effect the exchange obligation between said first party and said second party after ensuring that said first party and said second party have adequate value in said first account and said third account, respectively; and

    providing an instruction to said first exchange institution and said second exchange institution to adjust said second account and said fourth account in accordance with the adjustment of said first account and said third account, wherein said instruction being an irrevocable, time invariant obligation placed on said first exchange institution and said second exchange institution.

JA548 (emphasis added).

For purposes of its decision, the district court assumed that every asserted claim of the '510 patent requires the use of a computer. JA24, 30. That assumption rests squarely on the language of the claims. For example, in the '510 patent, the settlement transaction is "effect[ed]" when the "first account" and "third account" are "electronically adjust[ed]." JA1011 (¶ 36). This step, at a minimum, requires the use of an "electronic[]" device capable of adjusting two accounts that it "maintain[s]"—*i.e.*, a computer. JA1012 (¶ 38).

2.   The '479 Patent

Claims 33 and 34 of the '479 patent are also method claims. JA1007–11 (¶¶ 29–33). Claim 33 of the '479 patent reads:

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33. A method of exchanging obligations as between parties, each party holding a credit record and a debit record with an exchange institution, the credit records and debit records for exchange of predetermined obligations, the method comprising the steps of:

(a) **creating a shadow credit record and a shadow debit record** for each stakeholder party to be held independently by a supervisory institution from the exchange institutions;

(b) **obtaining from each exchange institution a start-of-day balance** for each shadow credit record and shadow debit record;

(c) for every transaction resulting in an exchange obligation, the supervisory institution **adjusting each respective party's shadow credit record or shadow debit record**, allowing only these transactions that do not result in the value of the shadow debit record being less than the value of the shadow credit record at any time, each said adjustment taking place in chronological order; and

(d) at the end-of-day, the supervisory institution **instructing ones of the exchange institutions to exchange credits or debits to the credit record and debit record** of the respective parties in accordance with the adjustments of the said permitted transactions, the credits and debits being irrevocable, time invariant obligations placed on the exchange institutions.

JA386 (emphasis added). Although the asserted claims of the '479 patent do not expressly recite that the method must be implemented "electronically," the claims use the terms "shadow credit record" and "shadow debit record." JA386. A person of ordinary skill in the art would recognize that these are electronic records requiring that these methods be implemented on a computer programmed to carry out the transaction, using an electronic data storage unit. JA1007–11(¶¶ 29–33).[2]

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[2]   *See also, e.g.,* JA365–66 ("The process effects these payment/receipts in a two-stage process. First, by debiting/crediting, on a real-time basis, the relevant shadow records (in the data file PAYACC SHADOW) of the applicable stakeholder accounts."). "[D]ata file PAYACC SHADOW" is a reference to data files in a data storage unit. JA1010 (¶ 32).

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As with the claims of the '510 patent, the district court assumed for purposes of its decision that the claims of the '479 patent require the use of a computer system. JA24.

III. THE ACCUSED CLS SERVICE

CLS provides a "continuous linked settlement" service for the settlement of payments related to foreign exchange transactions. JA90. As described by CLS in the district court, this service is implemented using computer hardware and software to maintain accounts for Members of CLS, process payments by Members into their accounts, receive and process instructions, carry out the steps in the settlement process, and issue payment instructions. JA91.

The service allows CLS to settle the payments relating to a foreign exchange transaction by having the computer system simultaneously debit and credit the accounts of the CLS Members involved in the transaction that are maintained on the CLS system, thereby minimizing the risk that one payment might be made but not the other. *Id.*[3] CLS Members electronically submit settlement instructions,

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[3]   CLS provided the district court with this example:

"For example, suppose Bank A has agreed with Bank B (both CLS Members) to exchange $100 milion for £50 million. Each Bank has a multicurrency Member Account with CLS Bank that is maintained on the CLS core system in the U.K. By settling this transaction using the CLS Service, Bank A's Member Account is debited $100 million and credited £50 million, while, simultaneously, Bank B's Account is credited $100 million and debited £50 million. By using the CLS

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and the CLS computer system receives, authenticates, and matches the instructions

relating to the same foreign exchange transaction. *Id.* The system then stores the

matched instructions until the settlement date. JA91–92. On the settlement date,

the computer system determines if settlement would cause the balances in the

affected Members' accounts to fall below or exceed predetermined limits. JA92.

If not, the transaction is settled by simultaneous debits and credits to the Member

accounts on the system. Actual payment occurs when the CLS system issues an

instruction to the relevant central bank—in the example CLS provided to the

district court, the Federal Reserve or the Bank of England—to pay the member.

JA 92 & n.3. As described by CLS, CLS's continuous linked settlement service

practices the asserted claims of Alice's '479, '510, '720, and '375 patents.

SUMMARY OF THE ARGUMENT

Alice's claimed computer systems are patent-eligible "machines"—concrete

things. They consist of hardware components that are expressly claimed. As

machines, the claimed computer systems fall within one of the statutory categories

of section 101. And because the claims are limited to concrete machines, they do

not fall within the judicially created exception to patentability for "abstract ideas,"

Service, [Bank A] can ensure it does not pay out $100 million without
receiving the corresponding payment from [Bank B] for £50 million
and vice versa."

JA91 n.2.

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the only judicially created exception that the district court or CLS has asserted applies; thus, the claims are patent-eligible under section 101. *See infra* Part II.A.

Although the district court purported to follow this two-step analysis, it erred by failing to give effect to each limitation of Alice's claims. Instead, the court identified what it considered to be the "heart" of Alice's invention—an abstract idea that it incorrectly equated with Alice's method claims. JA54–55. Having identified this "heart," the court concluded that the hardware limitations in Alice's computer system claims failed to add "any further exposition or meaningful limitation," so it effectively excluded the hardware limitations from its analysis. JA51. It then held that the concept that is left over, after one strips away Alice's actual claim limitations, is an abstract idea—and so the claim is unpatentable under the Supreme Court's decision in *Bilski v. Kappos. See infra* Part II.B.

Contrary to the district court's analysis, computer systems are machines, regardless of whether a claim to the method that the computer is programmed to carry out, if performed without any machine, would be considered "abstract." The district court's erroneous conclusion to the contrary arises from the premise that so-called "general-purpose" (*i.e.,* programmable) computer systems face heightened requirements for patent eligibility under section 101. But this premise has no legal support; neither the Supreme Court nor this Court has ever held any such thing. To the contrary, two decades ago, this Court, sitting *en banc,*

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considered and rejected precisely the same argument in *In re Alappat*, 33 F.3d
1526 (Fed. Cir. 1994) (en banc). *Bilski* did nothing to alter this analysis. *Bilski* did
not involve claims to computers—indeed, the "process" claims at issue did not
even involve the use of a machine. The district court thus erred in concluding that
Alice's computer system claims are not directed to patent-eligible machines. *See*
infra Part II.C.

The district court also erred in holding that Alice's claims are unpatentable
because they "preempt" a fundamental principle. The district court examined the
"preemptive force" of Alice's claims as if that were an independent test for patent
eligibility. It is not. At some level, every patent claim "preempts" the use of the
inventor's idea as reflected in his claims—indeed, a principal purpose of a patent is
to exclude, *i.e.*, preempt, others from practicing that which the inventor claimed.
But that is not the concern of the section 101 inquiry. Rather, that inquiry focuses
on a much narrower set of circumstances—those in which a patent's claims
preempt the use of an idea that can be described as a "fundamental principle" (such
as a law of nature, a natural phenomenon, a basic mathematical relationship, or a
basic abstract concept in some other field). The Supreme Court has indicated that
if a patent claim covers every conceivable practical use of such a basic principle—
that is, if it "preempts" the principle—the claim will not be patent-eligible under
section 101, even if by its terms it is not precisely directed to that principle. But

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"preemption" has no application here. Alice's claims are not to a fundamental

principle; they are computer systems configured to perform an exchange *in a*

particular way: by adjusting specified accounts in a specified manner, and then

generating an irrevocable instruction to implement the exchange at one or more

exchange institutions. *See infra* Part II.D.

The district court erred in similar ways with respect to Alice's claims to

computer program products. These claims, like Alice's computer system claims,

are directed to concrete and tangible things, not abstract ideas—in this case,

"manufactures" under section 101. *See infra* Part III.

Finally, the district court's analysis of Alice's method claims was also

incorrect. Under the "machine-or-transformation" test that the Supreme Court

endorsed as a "useful" guide to patent eligibility in *Bilski*, Alice's claims are tied to

a particular machine: they are limited to an electronic implementation using a

computer. The district court's conclusion that Alice's method claims are

unpatentable is based on the erroneous conclusion that a programmed "general-

purpose" computer is not a "particular" machine under the "machine-or-

transformation" test. This conclusion contradicts *Alappat* and has no support in

precedent. *See infra* Part IV.A. And Alice's method claims are not, in any event,

abstract. Contrary to the district court's conclusion, Alice has not claimed the

"abstract idea of employing an intermediary to facilitate simultaneous exchange of

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obligations in order to minimize risk." JA37. Even Alice's broadest method

claims recite only a particular *way* of employing an intermediary and a particular

series of concrete steps that intermediary must perform. *See infra* Part IV.B.

Alice's method claims are thus patent-eligible.

ARGUMENT

I.   STANDARD OF REVIEW

The district court's grant of summary judgment on the legal issue of whether

a claim is directed to patentable subject matter under 35 U.S.C. § 101 is reviewed

de novo. *See In re Ferguson*, 558 F.3d 1359, 1363 (Fed. Cir. 2009).

II.   ALICE'S COMPUTER SYSTEM CLAIMS ARE PATENT-ELIGIBLE UNDER 35 U.S.C. § 101.

Section 101 of the Patent Act sets forth the categories of subject matter that

are eligible for [patent] protection: "any new and useful process, machine,

manufacture, or composition of matter." 35 U.S.C. § 101. "Section 101

emphasizes that 'any' subject matter in the four independent categories . . .

qualif[ies] for [patent] protection." *Research Corp. Techs.*, 627 F.3d at 867. The

"expansive terms . . . modified by the comprehensive 'any'" in section 101 reflect

the "'wide scope'" of patent eligibility. *Bilski*, 130 S. Ct. at 3225 (quoting

Diamond v. Chakrabarty, 447 U.S. 303, 308 (1980)). The Supreme Court has

identified only "three specific exceptions to § 101's broad patent-eligibility

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principles: 'laws of nature, physical phenomena, and abstract ideas.'" *Id.* (citation omitted).

Thus, there are two basic steps in the section 101 inquiry. First, a court must identify the statutory category, if any, to which a claim is directed. Second, the court must "examine the Supreme Court's three exceptions" to determine whether any applies, *Research Corp. Techs.*, 627 F.3d at 868—here, the only question is whether the claims are directed to an abstract idea.[4] As this Court held in *Research Corp. Techs.*, for a claim to be invalid for claiming an abstract idea, the "disqualifying characteristic" of abstractness "should exhibit itself so manifestly as to override the broad statutory categories of eligible subject matter and the statutory context that directs primary attention on the patentability criteria of the rest of the Patent Act." *Id.*

If a claimed invention falls within a statutory category, and falls outside the three exceptions, the analysis ends: the claim meets the "threshold test" of section 101 and claims patent-eligible subject matter. *Id.* As this Court has emphasized, the analysis under section 101 is a narrow one, focused only on whether a patent claims the sort of subject matter that is eligible to be considered for a patent. Indeed, this Court has warned against importing patentability considerations

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[4]   Neither the district court nor CLS has asserted that any of Alice's claims is directed to a law of nature or a physical phenomenon.

arising from other sections of the statute into the subject-matter eligibility analysis, noting that section 101 "should not become a substitute for a patentability analysis related to prior art, adequate disclosure, or the other conditions and requirements of Title 35." *Id.*

A.   Computer Systems Are Concrete Machines, Not Abstract Ideas.

The devices claimed in Alice's computer system claims are "machines" under section 101. There is no dispute that these claims cover, and are limited to, computer hardware. They do not claim abstract ideas. Every one of Alice's system claims requires a "data processing system" comprising a "data storage unit" and a "computer, coupled to said data storage unit." *E.g.*, JA706 ('720 patent, claim 1). The system claims of the '375 patent require the presence of additional hardware components: a "communications controller" or "first party device." *E.g.*, JA868 ('375 patent, claims 12, 14).

Computers are "machines" under 35 U.S.C. § 101. For section 101 purposes, a "machine" is "a concrete thing, consisting of parts, or of certain devices and combination of devices." *In re Nuijten*, 500 F.3d 1346, 1355 (Fed. Cir. 2007) (quotation marks omitted). The Supreme Court first adopted this definition nearly 150 years ago, when considering whether a claimed machine fell within the "abstract idea" exception to patent eligibility under the nearly identical

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patent eligibility statute of the era. *See Burr v. Duryee*, 68 U.S. (1 Wall.) 531, 570 (1863) ("A machine is not a principle or an idea.").

The district court acknowledged that Alice's claims appear to fit this definition. It observed that "[a]t first glance, a computer is a concrete item made of parts that would appear to fit clearly within the statutory protection afforded by § 101 as a machine." JA47–48 (citing *Nuijten*, 500 F.3d at 1355). Likewise, CLS conceded below that Alice's computer system claims are "tie[d] . . . to a machine." JA1303.[5]

Given that a "machine" such as a computer system is a "concrete thing," it is unsurprising that neither the district court nor CLS cited *any* appellate authority invalidating a claim to a machine under the "abstract idea" exception to patent eligibility. Although the Supreme Court has stated that the exceptions to subject-matter eligibility apply equally to all four categories of statutory subject matter, *Gottschalk v. Benson*, 409 U.S. 63, 67–68 (1972), it is as a practical matter hard to conceive of a claim to a "concrete thing, consisting of parts" that is simultaneously

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[5]   CLS then argued that the computer system claims are not "tie[d] . . . to a *particular* machine." JA1273 (emphasis added). That assertion is wholly inapposite to the analysis of whether Alice's computer system claims are patent-eligible. The "tied to a particular machine" language derives from the "machine-or-transformation" test, which is a "useful" guide to determining patent eligibility of *process* claims—not *machine* claims. *Bilski*, 130 S. Ct. at 3225–26 (internal quotation marks omitted). Moreover, as discussed below, Alice's process claims are tied to a "particular" machine under the "machine-or-transformation" test. *See infra* Part III.A.

a claim to an "abstract idea." *Nuijten*, 500 F.3d at 1355; *Burr*, 68 U.S. at 570; *see*

In re Warmerdam, 33 F.3d 1354, 1360–61 (Fed. Cir. 1994) (observing that a claim

to "a machine having a memory" containing specified data "is for a machine, and

is clearly patentable subject matter"). And in the particular context of computer

systems, this Court has expressly held that "a computer operating pursuant to

software," like the computer systems Alice has claimed, "is apparatus, not

mathematics." *In re Alappat*, 33 F.3d 1526, 1545 (Fed. Cir. 1994) (en banc); *see*

also, e.g., In re Iwahashi, 888 F.2d 1370, 1375 (Fed. Cir. 1989). Such a claim is

"not a disembodied . . . concept which may be categorized as an 'abstract idea,'"

Alappat, 33 F.3d at 1544, but rather describes a "concrete thing," *Nuijten*, 500 F.3d

at 1355.

Here, there is no dispute that Alice's computer system claims are to "a

concrete thing, consisting of parts"—a machine. By definition, this is not merely

an abstract idea. The claims are thus patent-eligible.

B.   Alice's Computer System Limitations May Not Be Ignored.

The district court erred by setting aside the actual limitations of Alice's

computer system claims and looking only at what it perceived to be the underlying

idea animating Alice's invention—which it then held to be abstract. The district

court concluded that "the true 'heart' of Alice's invention . . . what, at base, is

claimed by the '720 Patent claims . . . is an abstract concept." JA54–55. As

discussed below, *see infra* Part II.D, the district court was mistaken that the "heart" of Alice's invention is an abstract concept. But, more fundamentally, the court's focus on the supposed "heart" of Alice's invention—rather than on what Alice actually claimed in each claim—was erroneous.

It is fundamental that patent validity is determined claim by claim, and that the validity of a claim depends on the particular limitations—all of the limitations—of that claim. *Nat'l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd.*, 357 F.3d 1319, 1334 (Fed. Cir. 2004); *Ortho Pharm. Corp. v. Smith*, 959 F.2d 936, 942 (Fed. Cir. 1992). Indeed, "[e]ach claim of a patent . . . shall be presumed valid independently of the validity of other claims." 35 U.S.C. § 282. In this respect, the analysis under 35 U.S.C. § 101 is no different from the analysis of any other alleged basis for invalidity asserted as a defense in an infringement action.

The Supreme Court has made clear that a claim may not be stripped down to some supposed "'essential' element, 'gist,' or 'heart' of the invention," but rather must be viewed as a whole, with all of its limitations given effect. *Aro Mfg.*, 365 U.S. at 345. In the section 101 context in particular, the Court has emphasized that it is inappropriate to "dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis." *Diehr*, 450 U.S. at 188. "The 'novelty' of any element . . . is of no relevance in determining whether the subject matter of a claim falls within the [section] 101 categories of possibly

patentable subject matter." *Id.* at 188–89. Considering a claim to a process for curing rubber, the *Diehr* Court explained that *all* of the steps of the process—including those that were "well known and in common use"—must be considered in the section 101 analysis. 450 U.S. at 188. A combination of old and new elements is often patentable—indeed, most inventions are combinations of old elements, *see KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418–19 (2007)—and determining patent eligibility requires consideration of the entire combination. *Diehr*, 450 U.S. at 188.

The district court did precisely what the Supreme Court forbids: it "dissect[ed] the claims" and pulled out their purported "heart." *Id.* The court set aside the "old" computer elements and focused only on whether what it considered to be the "new" part of Alice's claims—the method of implementing exchanges—was abstract. It thus failed to consider the claims "as a whole," as *Diehr* requires. *Id.*; *see also Iwahashi*, 888 F.2d at 1375 (underscoring that a court may not ignore limitations and treat "machine" or "manufacture" claim "as though it were a method claim").

The district court first analyzed Alice's method claims. JA20–44. It determined that these claims are invalid as abstract ideas under *Bilski*.[6] It relied, in part, on the fact that Alice's method claims "at most implicitly recite a computer."

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[6]   As discussed below, *see infra* Part IV, that determination is itself erroneous.

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JA31. In so doing, it observed that "the drafters of the claims of the '479 Patent knew how to explicitly recite to computer components," and cited other (unasserted) claims of the '479 patent containing express "data processing apparatus" limitations. JA32–33. Then, having concluded that the method claims are invalid, it characterized Alice's machine claims as "merely the incarnation of th[e same] abstract idea on a computer, without any further exposition or meaningful limitation," JA51—even though Alice's machine claims expressly recite the same type of computer component limitations that the district court faulted Alice for supposedly omitting from its method claims.

The district court found particularly persuasive the fact that the language of the machine claims "mimics the language of method claim 68" of the '510 patent in that Alice's machine claims require, *inter alia*, a "computer, coupled to [a] data storage unit, that is configured to perform" method steps that are "almost identical" to the steps of method claim 68. JA9, 51 (comparing '720 patent, claim 68 to '510 patent, claim 68); *see also* JA53 ("The system claims are no more limited than the method claims simply because they are directed to a data processing system."). The district court characterized these similarities as an "attempt to employ the draftsman's art to save these claims" from failing a section 101 analysis, given the district court's (also erroneous) conclusion that the method claims are ineligible. JA45.

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The district court erred by dispensing with the system claims as the product of "the draftman's art," for they contain additional structural limitations and claim a concrete thing, and thus recite a separate invention from the method claims. A claim to a system and a claim to a method recite different inventions that are treated differently under the law—for instance, the law is clear that such claims are infringed in different ways. *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1317–18 (Fed. Cir. 2005). The district court erred in not recognizing that Alice's system claims must be considered independently of its method claims, even if both emanate from the same underlying "heart" of an idea.

The district court's reference to the "draftsman's art" arises from *Parker v. Flook*, in which the Supreme Court stated that "the determination of patentable subject matter" should not "depend simply on the draftsman's art." 437 U.S. 584, 593 (1978). In *Flook*, the claim was to a method of calculating an "alarm limit"— a mathematical value. The patentee attempted to avoid a finding that the claim was simply directed to a mathematical algorithm by inserting into the preamble language reciting that the claimed method was for updating the value of an alarm limit on a "process variable involved in" a particular class of chemical processes. *Id.* at 596 app. The Supreme Court found that this drafting exercise—which left a claim still directed to a mathematical calculation but specified a field of use for it—did not save the claim. *Id.* at 593–95.

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After *Flook*, the Supreme Court revisited the question of subject-matter

eligibility in *Diehr*. And in *Diehr*, the Court made clear that what matters for

purposes of section 101 are the limitations actually claimed by a patentee. This is

not a focus on the "draftsman's art," but rather a recognition that the patent

eligibility of a claim depends upon what limitations a claim actually recites, and

thus what invention it actually defines. While the patentee in *Flook* had claimed a

method of performing a calculation and specified in the preamble a context in

which the calculation would be performed, the patentee in *Diehr*, by contrast,

claimed an "improved process for molding rubber articles" that made *use* of a

mathematical algorithm. *Id.* at 181. Over a vigorous dissent by the author of

Flook that quoted *Flook*'s reference to the "draftsman's art," the *Diehr* Court held

that this claim, drafted as it was to a specific process that made use of an

algorithm, was patent-eligible even though the algorithm itself was not. *Id.* at 187;

see id. at 213–15 & n.36 (Stevens, J., dissenting). The same principle applies here.

Alice's system claims describe concrete, tangible machines that are patent-eligible,

whether or not the systems are configured to perform a process that, standing

alone, would be abstract (a premise which, as shown below, is incorrect in any

event).

Simply put, there is no authority for the proposition that in a validity

analysis (under section 101 or otherwise), claim limitations requiring machine

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components may be ignored because the components' function is to carry out

method steps—whether or not the method steps, in the absence of the limitations,

would be considered abstract. *E.g., Iwahashi,* 888 F.2d at 1375; *Diehr,* 450 U.S. at

188.

C.   The Fact that a Claimed Machine Is a Programmable Computer Does Not Alter the Section 101 Analysis.

The district court disregarded the express limitations in Alice's machine

claims to computer hardware components, configured to perform specific steps,

because of a mistaken belief that computers that are programmable with

software—so-called "general purpose" computers—should be analyzed differently

from other machines under section 101. In support of its holding that Alice's

claims are directed to an abstract idea, the district court stated that "[t]he system

claims are no more limited than the method claims simply because they are

directed to a data processing system." JA53. And in discussing Alice's dependent

claims, the district court observed that the claims "recite details to flesh out the

steps . . . [by] which obligations are to be exchanged . . . but do not further describe

or limit the claimed data processing system as a machine." JA54. Both of these

statements rely on a premise that this Court, sitting *en banc,* has squarely rejected:

that a claim to a computer, configured to perform particular operations, "may be

characterized as an 'abstract idea'" because it is a general-purpose computing

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device that is programmed to implement the idea using software. *Alappat*, 33 F.3d at 1544.

Alappat concerned the patent eligibility of claims to a "rasterizer" comprising "arithmetic logic circuit[s]" that were configured to carry out the steps of a mathematical algorithm for smoothing an input waveform, such as for use in the display of an oscilloscope. *Id.* at 1537–39. There was no serious dispute that the mathematical algorithm, "standing alone[,] would not be entitled to patent protection"—it would be an abstract idea. *Id.* at 1543. Based on this observation, the Board of Patent Appeals and Interferences held that Alappat's claim 15 was "unpatentable merely because it 'reads on a general purpose digital computer "means" to perform the various steps'" of this unpatentable algorithm. *Id.* at 1544. The Board reasoned that "the fact that claim 15 reads on a programmed digital computer . . . justifies treating claim 15 as a process claim." *Id.* at 1545 n.25.

This Court rejected both the Board's holding and its reasoning. *Id.* at 1544–45. In *In re Iwahashi*, this Court had previously held that an electronic circuit that was hard-wired to carry out an algorithm—referred to in *Alappat* as a "special purpose" computer, 33 F.3d at 1545—was a patent-eligible "machine." *Iwahashi*, 888 F.2d at 1375; *see Alappat*, 33 F.3d at 1544 & n.24 (discussing *Iwahashi*). The *Alappat* Court reasoned that just as hardwired electrical circuits constitute a "machine" and are not unpatentable merely because they can perform

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mathematical calculations, a programmable computer that performs mathematical calculations based on its software programming is similarly a patentable "machine." 33 F.3d at 1545 (observing that "a general purpose computer *in effect becomes* a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software" (emphasis added)); *see In re Noll*, 545 F.2d 141, 148 (C.C.P.A. 1976).

The Board in *Alappat* erred by treating computers differently from other kinds of machines, just because they are programmable; as the *Alappat* Court noted, "[u]nder the Board majority's reasoning, a programmed general purpose computer could never be viewed as patentable subject matter under § 101. This reasoning is without basis in the law." 33 F.3d at 1545. Whether the programming is performed by loading software code or soldering wires, the "claimed subject matter *as a whole*" is not "a disembodied mathematical concept" but rather "a combination of interrelated elements which combine to form a machine." *Alappat*, 33 F.3d at 1544 (citing *Diehr*). Thus, the *Alappat* Court concluded, "a computer operating pursuant to software . . . is apparatus[,] not mathematics" and is therefore patentable "provided . . . that the claimed subject matter meets all of the other requirements of Title 35." *Id.* at 1545.[7] That is precisely the case with Alice's

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[7]   In holding that programmed computers like Alice's are patent-eligible, the *Alappat* Court observed that the computer system at issue was "a specific machine to produce a useful, concrete, and tangible result." 33 F.3d at 1544. But *Alappat*

computer system claims, which claim a computer system configured to implement exchanges in the particular manner described in the claims.[8]

Since *Alappat*, this Court has consistently held that a computer programmed to perform a particular function or method is a "machine" within the meaning of section 101. *See State Street Bank & Trust Co. v. Signature Fin. Grp., Inc.*, 149 F.3d 1368, 1375–77 (Fed. Cir. 1998); *In re Bilski*, 545 F.3d 943, 959 & n.18 (Fed. Cir. 2008) (en banc), *aff'd*, 130 S. Ct. 3218 (noting that *State Street* "addressed a claim drawn . . . to a *machine*").[9] Nothing in *Bilski v. Kappos* even suggests that a

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did not use the presence or absence of a "useful, concrete, and tangible result" as a test for patent eligibility. Rather, it followed the two-step analysis that the Supreme Court later reaffirmed in *Bilski*. *Id.* at 1542–43.

[8]   Although Alice's claims are to programmed computers and thus squarely patent-eligible under *Alappat*, it bears noting that with nothing more, a claim to a "data processing system" comprising "a computer, coupled to [a] data storage unit" would meet the definition of "machine" under § 101. *Nuijten*, 500 F.3d at 1355. To be sure, today, without further claim limitations, such a system would be anticipated under 35 U.S.C. § 102, but that does not take it out of the statutory category of "machine" under section 101. As this Court has emphasized, "section 101 eligibility should not become a substitute for a patentability analysis related to prior art, adequate disclosure, or the other conditions and requirements of Title 35." *Research Corp. Techs.*, 627 F.3d at 868; *see also State Street Bank & Trust Co. v. Signature Fin. Grp., Inc.*, 149 F.3d 1368, 1377 (Fed. Cir. 1998) ("Whether the patent's claims are too broad to be patentable is not to be judged under § 101, but rather under §§ 102, 103, and 112.").

[9]   The district court criticized Alice's citation to *State Street*, observing that its "useful, concrete, and tangible result" test has been "thoroughly rejected." JA50. But while this Court in *In re Bilski* and the Supreme Court in *Bilski v. Kappos* rejected "useful, concrete, and tangible result" as the test, *see* 545 F.3d at 959; 130 S. Ct. at 3225, *State Street*'s conclusion that a computer configured to perform a

computer should not be treated the same as any other "machine" in a section 101 analysis. Indeed, *Bilski* did not even concern a "machine"—it involved only "process" claims, and those claims did not involve or recite the use of any machine. 130 S. Ct. at 3225. Both before and after *Bilski*, a claim to computer hardware is patent-eligible as a claim to a "machine." The asserted claims of Alice's '720 and '375 patents describe patent-eligible machines.

D.   Alice's Claims Do Not "Preempt" a Fundamental Principle.

The district court also erred by holding that Alice's computer system claims "preempt" a fundamental principle. JA40–41, 50–53.[10] Although Supreme Court cases discuss "preemption" of fundamental principles as an evil that section 101 was intended to cure, the district court incorrectly examined "preemption" as though it were the test for subject matter eligibility.

There is no stand-alone requirement that a patent claim avoid "preempt[ing] the use" of any idea in all the ways that, "as a practical matter, . . . [the idea is] likely to be applied." JA51–52. Neither the Supreme Court nor this Court has ever suggested that "preemption" of a method or idea that is *not* a fundamental principle renders a patent claim invalid under section 101, nor that review for "preemption"

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particular method does not somehow cease to be a patent-eligible, concrete "machine," remains good law. *See In re Comiskey*, 554 F.3d 967, 978–79 & n.14 (Fed. Cir. 2009) (reaffirming that *State Street* upheld claims to "machines").

[10] The district court applied the same erroneous preemption analysis to all of Alice's claims.

is a separate step of the section 101 analysis if a claim has been determined not to be abstract. That is because "preemption" does not even apply in cases such as this where the claims do not purport to cover a fundamental principle. Indeed, in *Research Corp. Technologies, Inc. v. Microsoft Corp.*, this Court did not even mention preemption when it considered whether the claims at issue described abstract ideas. 627 F.3d at 859. And even if "preempting" an idea renders a patent claim invalid, Alice's claims do not do so; they require both specified machine components and specified steps for carrying out an exchange in a particular way.

The district court's emphasis on the "preemptive force" of Alice's claims, *e.g.*, JA50, besides resting on a misunderstanding of the claims, misapplies the precedents that discuss "preemption." By definition, *every* patent claim has "preemptive force." The relevant question therefore is not whether a patent claim has "preemptive force" but whether, considering all of its limitations, the claim is directed to a *fundamental principle* itself. *Diehr*, 450 U.S. at 187 (contrasting claims to fundamental principles with claims to "*application*" of fundamental principles).

For purposes of section 101, "preemption" simply refers to the premise that the patent system should not be used to monopolize basic concepts, which "are not the kind of 'discoveries' that the [patent] statute was enacted to protect." *Flook*, 437 U.S. at 593. As the Supreme Court has explained, "[p]henomena of nature,

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though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work." *Benson*, 409 U.S. at 67; *see also Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948) (natural phenomena "like the heat of the sun, electricity, or the qualities of metals, are part of the storehouse of knowledge of all men . . . free to all men and reserved exclusively to none."); *Chakrabarty*, 447 U.S. at 309 ("[A] new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. Likewise, Einstein could not patent his celebrated law that $E=mc^2$; nor could Newton have patented the law of gravity."); *Bilski*, 130 S. Ct. at 3231 (observing that the "basic concept of hedging" is not patentable).

The concept of "preemption" of such a fundamental principle arises from the Supreme Court's decision in *Gottschalk v. Benson*. The *Benson* Court considered, and invalidated, process claims to a mathematical algorithm for converting integers from one form that was useful on a digital computer ("binary-coded decimal") to another ("binary"). 409 U.S. at 64. In so doing, it stated that "the patent would wholly pre-empt the mathematical formula" because "[t]he mathematical formula involved here has no substantial practical application except in connection with a digital computer." *Id.* at 71–72.

As the Supreme Court understood the patent in *Benson*, the patentees were attempting to patent a fundamental principle of computer science: a mathematical

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relationship between the integers. The claims in *Benson* were directed to a

mathematical algorithm—a "data processing method for converting binary coded

decimal number representations into binary number representations." *Id.* at 74 (for

example, step 3 stated "if a binary '1' is detected, adding a binary '1' at the

(i + 1)th and (i + 3)th least significant binary digit positions of the next lesser

significant decimal digit representation"). Because the claims, as the Court read

them, "were not limited to any particular art or technology, to any particular

apparatus or machinery, or to any particular end use," they had the effect of

monopolizing the fundamental principle. 409 U.S. at 64.[11] Even if the *Benson*

claims were interpreted as limited to a method of programming a computer, the

claims were directed *only* to a mathematical principle, a relationship between

integers, and nothing more—"in practical effect," they sought "a patent on the

algorithm itself." *Id.* at 72.

For purposes of section 101, "preemption" does not apply where a claim

does not involve a fundamental principle in the first place, nor does such a claim

raise the sorts of concerns that underlie this doctrine. Every patent claim, at its

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[11]   In this sense, *Benson* parallels *O'Reilly v. Morse*, in which the Court rejected a patent claim to "electro magnetism, however developed, for marking or printing intelligible characters, signs, or letters, at any distances"—that is, a claim to the basic idea of applying electromagnetism to communication—but upheld a claim to the use of electromagnetism to transmit Morse code. 56 U.S. (15 How.) 62, 112 (1854).

most basic level, involves some idea that can be phrased in an abstract way if viewed at a high enough level of generality, as the district court viewed Alice's claims here. The purpose of a patent claim is to "preempt" practical uses by others of the inventor's invention—*i.e.*, to exclude others from using it. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (claims "define the invention to which the patentee is entitled the right to exclude") (quotation marks omitted). Claims are not rendered unpatentable because they preempt all uses of the inventor's invention.

Against this backdrop, the district court's "preemption" analysis was erroneous in multiple respects. Alice's claims to machines, with specified hardware components, do not preempt every practical use of a fundamental principle like the mathematical relationship between integers, principles of electromagnetism, or the basic economic concept of hedging risk. Indeed, Alice has not claimed any "fundamental principle" at all. Alice's claims are to a particular manner of implementing an exchange so as to avoid the risks that otherwise would be present, not to a "basic tool[] of scientific and technological work." *Benson*, 409 U.S. at 67. Indeed, even if one were to consider the "underlying" method of Alice's claims—*i.e.*, the sequence of steps, stripped of the requirement that they be carried out using the claimed hardware components—the method would not reflect a fundamental principle raising preemption concerns, for

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the claims would still not be directed to a basic idea or concept. Rather, they would describe a particular way of implementing exchanges, which at most would be a patent-eligible *application* of an underlying idea. *Diehr*, 450 U.S. at 187–88.

Moreover, the district court vastly overstated what Alice's claims would "preempt." Alice's claims do not "preempt" any "abstract concept." JA37, 51. What Alice's claims actually cover—and "preempt"—is the use of *specified machine components to carry out a particular series of steps.* They do not cover the use of analogous, "abstract" method steps that do not meet the machine limitations. Indeed, the uncontradicted testimony of Alice's expert is that the underlying steps of Alice's claimed method, stripped of their "electronic" implementation, can be carried out without a computer—and without infringing Alice's claims. JA1012–13 (¶¶ 38–41).

Nor do Alice's claims cover every computer configured as a "neutral intermediary to facilitate simultaneous exchange of obligations in order to minimize risk," JA51, or every method for implementing such exchanges. For instance, the claims require that the computer maintain two accounts, corresponding to accounts at one or more exchange institutions, which are then adjusted as described in the claims. There is nothing preventing someone else from designing a different computer system that implements exchanges in a different way, using a different configuration of accounts or no accounts at all—

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Alice's claims would not "preempt" such a different system. To the contrary, what Alice's claims describe are particular computers configured to implement exchanges in a particular way—not only using specified machine components, but by performing a specified series of steps and maintaining and adjusting accounts in a specified way. *See infra* Part IV.

III. ALICE'S COMPUTER PROGRAM PRODUCT CLAIMS ARE PATENT-ELIGIBLE.

The district court similarly erred with respect to Alice's computer program product claims. The district court correctly held that these claims, which are limited to man-made, tangible items, fall within the definition of "manufacture": "one or more articles prepared 'for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery.'" JA45 (quoting *Nuijten*, 500 F.3d at 1356). Despite this holding, the district court found these claims to tangible manufactures to be impermissibly abstract for the same reasons as the system claims. JA56–57 (stating that computer program product claims "are also directed to the same abstract concept," and that "[t]he additional elements . . . do[] little to mitigate the preemptive effect of these claims on the fundamental concept"). In so holding, the district court erred for the same reasons discussed above with respect to the system claims. When the product claims' limitations are taken into account, these claims "as a whole" are directed to concrete objects usable for a particular purpose, not

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abstract ideas, and are thus patent-eligible. *See Diehr*, 450 U.S. at 188; *see also*

supra Part II.

IV. ALICE'S METHOD CLAIMS ARE TIED TO A MACHINE AND ARE NOT ABSTRACT.

The final group of Alice's asserted claims cover methods of implementing

exchanges—"processes," under 35 U.S.C. § 101. There is no dispute that Alice's

claims meet the definition of "process" under 35 U.S.C. § 100(b). JA21. The

question is whether Alice's claimed processes are nonetheless drawn to abstract

ideas and therefore not patentable.

A. Alice's Claims Meet the Machine-or-Transformation Test.

As the Supreme Court explained in *Bilski*, the "machine-or-transformation"

test is a "useful and important clue" for determining patent eligibility of method

claims. *Bilski*, 130 S. Ct. at 3227. Alice's methods satisfy this test because they

are "tied to a particular machine or apparatus," *id.* at 3224–26—*i.e.*, they are to be

performed on a computer.

The district court assumed—based on the parties' agreement to assume a

claim construction favorable to Alice—that Alice's method claims are "directed to

computer implementation." JA24–25 & n.6. In other words, the district court

assumed—correctly—that Alice's method claims are "tied to a machine." JA25–

26. But the court nonetheless held the method claims to be invalid because,

despite being limited to an electronic, computer-based implementation, the court

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did not consider them "tied to a particular machine." The court reasoned that while

the method claims are tied to a machine, that machine—an electronic "general-

purpose" computer—is not "particular." JA26. In other words, the district court

held that the method claims were not sufficiently tied to a *particular computer* to

be patent-eligible. JA26.

The district court's analysis was based principally on a district court decision

issued after this Court's decision, but before the Supreme Court's decision, in

Bilski. Imposing a heightened requirement for computer-implemented claims that

neither the Supreme Court nor this Court has ever endorsed, the district court

concluded that "[t]he salient question is not whether the claims are tied to a

computer. Rather . . . the question is whether the claims are tied to a *particular*

machine." JA27 (quoting *Fuzzysharp Techs., Inc. v. 3D Labs Inc.*, No. C 07-5948,

2009 U.S. Dist. LEXIS 115493, at *12 (N.D. Cal. Dec. 11, 2009)).[12]

The district court's reasoning is fundamentally flawed. As discussed above,

under any definition, a programmed computer is a "particular machine." This

Court has held that when a computer is programmed to perform certain steps, it "in

effect becomes a special purpose computer," *i.e.*, a particular machine with a

particular purpose. *See, e.g., Alappat*, 33 F.3d at 1544–45; *see supra* Part II.C.

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[12]   The decision in *Fuzzysharp* is currently on appeal to this Court in No. 2010-
1160; the appeal is set for oral argument on July 7, 2011.

Nothing in *Bilski* or any decision of this Court undermines this precedent. In this case, construing the method claims in a manner favorable to Alice, as the district court said it was doing, JA25, requires that they be construed to require the use of a computer "configured and programmed to carry out the processes of the claims." JA1014 (¶ 44). *See generally* JA1011–15 (¶¶ 34–45). They are thus tied to a "particular" machine.

Neither the Supreme Court nor this Court has ever held that a computer is not a "particular" machine, nor suggested that any level of "particularity" is needed beyond a requirement for hardware components that are more specific than some unspecified "machine" or "apparatus." Indeed, as discussed above, this Court's precedent holds that a so-called "general purpose" computer is no different from any other machine for purposes of section 101. *Alappat*, 33 F.3d at 1545; *In re Chatfield*, 545 F.2d 152, 157 (C.C.P.A. 1976) (finding "no basis for treating methods of operating computing machine systems differently from methods of operating any other form of machine system"); *see supra* Part II.C; *see also* JA1139 (PTO examination instructions) (deeming "microprocessor" used to implement "method of evaluating search results" patent-eligible). A computer is a "particular" machine in exactly the way that an "oven" or a "motor vehicle" is. Rather than using a generic, unspecified "machine," Alice's claims require a particular kind of machine, a computer—indeed, Alice's claims require a computer

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that has been programmed to perform Alice's particular method. That is all the "machine-or-transformation" test requires.

The district court also erred in concluding that Alice's method claims failed the "machine-or-transformation" test because the computer used in the methods fails to "impose[] meaningful limits on the process itself." JA29. Despite assuming for purposes of its decision that Alice's method claims *require* implementation by a computer, JA24, the court held that "general-purpose computer" (JA30) it believed the claims require fails to provide a meaningful limit because "the methods before the Court could be performed without use of a computer." JA34.

The district court's conclusion that the use of a computer required by Alice's method claims fails to impose a "meaningful limit" was erroneous. The "meaningful limit" analysis is not about whether a process could be implemented by an alternative means. Rather, the focus must be on the role the machine described performs in the process as claimed.

For instance, if a claim "as a whole" is abstract, it is not sufficient for the patentee to add "insignificant extra-solution activity", that is, a step at the beginning to "gather[] data" or a step at the end to record a result. *In re Bilski*, 545 F.3d at 963; *In re Schrader*, 22 F.3d 290, 291 (Fed. Cir. 1994) (recordation of winning bids does not render process patent-eligible); *In re Grams*, 888 F.2d 835,

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840 (Fed. Cir. 1989) ("deriv[ing] data" for algorithm "will not render the claim

statutory"); *In re Meyer*, 688 F.2d 789, 794 (C.C.P.A. 1982) (data-gathering steps

will not render claim patent-eligible).

Instead, to impose a meaningful limit on a claim, a machine "must play a

significant part in permitting the claimed method to be performed, rather than

function solely as an obvious mechanism for permitting a solution to be achieved

more quickly, i.e., through the utilization of a computer for performing

calculations." *SiRF Tech., Inc. v. Int'l Trade Comm'n*, 601 F.3d 1319, 1333 (Fed.

Cir. 2010). Alice's claims satisfy this test. Indeed, the computer plays more than a

significant part in permitting the claimed method to be performed. Alice's claims

are to methods of executing exchanges between parties. The methods require that

the claimed process be implemented on a computer. The computer electronically

maintains accounts for the parties and then electronically performs the specific

method steps that execute the exchange transaction. JA30; *see, e.g.*, JA548 ('510

patent, claim 68). The computer is thus integral to the claimed methods.

In concluding that "the methods before the Court could be performed

without use of a computer," JA34, the court was considering Alice's method steps,

but stripped of the requirement of electronic implementation. *Id.* (discussing

whether accounts can be maintained, an intermediary employed, and instructions

given, without the use of a computer). The relevant question, however, is not

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whether the court could envision another claim performing the "underlying" steps

of Alice's method without requiring the use of a computer. Rather, as this Court

explained in *SiRF*, the issue is whether the machine plays a significant part in

"permitting the *claimed* method to be performed," 601 F.3d at 1333 (emphasis

added)—here, whether the computer plays a significant part in the methods Alice

actually claimed. The computer that implements Alice's claims does so.

Accordingly, the requirement of computer implementation is a "meaningful limit"

on the claims, and Alice's methods meet the "machine-or-transformation" test.

B.   Alice's Method Claims Are Not Directed to Abstract Ideas.

In holding that the "machine-or-transformation" test is not the sole test of

patent eligibility, the Supreme Court in *Bilski* refocused the analysis on the

ultimate question of whether a claim merely describes an abstract idea. Although

Bilski suggests that a claim that meets the "machine-or-transformation" test will be

patent-eligible, the "machine-or-transformation" test is only a helpful guide in the

abstractness determination, not an end in itself. Alice's method claims are readily

distinguishable from those in *Bilski* and are not directed to abstract ideas.

Each of Alice's claims discloses a particular *way* of settling obligations that

is implemented in a concrete, technological manner by electronic adjustment of

particular records. Alice's claims do not cover every method of using a computer

configured to settle obligations using an intermediary. JA37. Rather, all of Alice's

claims require that the obligations be settled in a particular way—for example, by electronically adjusting a "first account" and "third account" (or "shadow records") to effect an exchange on a computer system, then generating instructions to exchange institutions such as central banks, "in accordance with the adjustment of said first account and said third account," to implement the exchange at the "exchange institutions." JA548.

An important feature of this particular way of implementing an exchange between parties is that the intermediary, using principles of transaction processing, can ensure that both sides of an exchange are carried out or else that neither one is. For example, if two counterparties want to exchange dollars for euros, they want either the dollars to flow one way and the euros to flow the other or neither the dollars nor the euros to flow. The situation to be avoided is one where the dollars flow one way and the corresponding euros do not. The claims require that a computer system first carry out the transaction in its own internal records by "updating shadow records in real-time," and second "effect . . . the exchange of obligations in accounts maintained external[ly]" "from time to time." JA392. Moreover, the specification describes at great length, and in great detail, how to build a computer system to, among other things, implement exchanges in this particular manner. *E.g.*, JA517–19.

Unlike Alice's claims, the claims in *Bilski* were not confined to an electronic implementation or to a particular way of conducting particular transactions. Claim 1 in *Bilski* described nothing more than the "concept of hedging risk"— setting up two transactions, at two different fixed rates, to protect a party from swings in a commodity's value. 130 S. Ct. at 3223–24, 3229. The patentee in *Bilski* conceded that the claims did not require a machine implementation, and the claims were not limited to a particular way of carrying out transactions. Rather, the claims in *Bilski*—unlike the claims at issue here—covered pure "mental steps" that could be carried out without any apparatus at all. *Id.* at 3224.

Although the district court characterized Alice's claims as claiming "the abstract idea of employing an intermediary to facilitate simultaneous exchange of obligations in order to minimize risk," JA37, the claims are not nearly so broad or abstract. *Research Corp. Technologies* is instructive. The patent there claimed "method[s] for the halftoning of . . . images." 627 F.3d at 865. Although one could classify the algorithmic methods claimed in that patent as "abstract ideas," this Court declined to do so—not because they met the "machine-or-transformation" test, but because they claimed a particular *way* of carrying out halftoning, a "functional and palpable application in the field of computer technology" (specifically, the use of computer technology to print or display images). *Id.* at 868–69. Alice's claims, similarly, are directed to particular

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methods of using computer technology to implement exchanges. They do not cover every transaction involving an intermediary or for implementing exchanges, and they are limited to a particular practical and technological implementation. For these reasons, as well as those discussed above in connection with Alice's computer system claims, *see supra* Part II.D, the district court also erred in holding that Alice's method claims "preempt" a fundamental principle. *E.g.*, JA40–41.

In effect, what the district court did with Alice's method claims, just as with the "machine" and "manufacture" claims, was to look for the basic concept underlying what Alice claimed—the "heart" of the invention. Having concluded that this "heart," in isolation, was not patent-eligible, the court imposed a rule that a "computer" limitation was insufficient to confer patent eligibility, then discarded every other claim limitation as insufficient as well. This is not the proper analysis. Rather, the fundamental question is whether *what Alice actually describes in each claim*—which undisputedly meets the definition of a "process," a "manufacture," or a "machine"—is, nevertheless, a claim to an abstract idea itself. Under this proper analysis, none of Alice's claims is "so manifestly abstract as to override the statutory language of section 101." *Research Corp. Techs.*, 627 F.3d at 869; *see id.* at 868.

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CONCLUSION

For the foregoing reasons, the judgment of the district court should be

reversed, and the case remanded for further proceedings.

Respectfully submitted,

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June 24, 2011

ADDENDUM

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

CLS BANK INTERNATIONAL,	))
Plaintiff,	)))
v.	)) Civil Action No. 07-974 (RMC)
ALICE CORPORATION PTY. LTD.,	))
Defendant.	))

ORDER

For the reasons stated in the Memorandum Opinion filed simultaneously with this

Order, it is hereby

ORDERED that plaintiff CLS Bank International's motion for summary judgment

[Dkt. # 94] is **GRANTED**; and it is

FURTHER ORDERED that defendant Alice Corporation's cross-motion for partial

summary judgment [Dkt. # 95] is **DENIED**; and it is

FURTHER ORDERED that this case is **DISMISSED** and closed.

This is a final appealable order. *See* Fed. R. App. P. 4(a).

SO ORDERED.

Date: March 9, 2011

_____/s/_____
ROSEMARY M. COLLYER
United States District Judge

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

CLS BANK INTERNATIONAL,	)
	)
Plaintiff,	)
	)
v.	) Civil Action No. 07-974 (RMC)
	)
ALICE CORPORATION PTY. LTD.,	)
	)
Defendant.	)

MEMORANDUM OPINION

CLS Bank International moves for summary judgment, contending that all patent

claims asserted by Alice Corporation Pty. Ltd. in this case are invalid under 35 U.S.C. § 101 for lack

of patentable subject matter. Alice cross-moves for partial summary judgment, arguing that its

asserted claims are directed to patent-eligible subject matter. Before the Court are claims 33 and 34

of U.S. Patent No. 5,970,479, and every claim of U.S. Patent No. 6,912,510; U.S. Patent No.

7,149,720; and U.S. Patent No. 7,725,375. For the reasons set out below, the Court finds each of

the claims at issue to be directed to unpatentable subject matter and will grant summary judgment

in full to CLS.

I. FACTS

A. The Patents

Alice is an Australian company that owns four United States patents; it asserts that

CLS infringes these four patents. CLS is an "Edge Act Corporation," organized under Section 25A

of the Federal Reserve Act, as amended, 12 U.S.C. § 611, and authorized by statute to engage in

international banking activities. In response to Alice's charge of infringement, CLS challenges the

subject matter patentability of the asserted claims of the four patents. Alice's four patents at issue are: (1) U.S. Patent No. 7,149,720 ("'720 Patent"); (2) U.S. Patent No. 6,912,510 ("'510 Patent"); (3) U.S. Patent No. 5,970,479 ("'479 Patent"); and U.S. Patent No. 7,725,375 ("'375 Patent") (collectively the "Patents"). The relevant claims of the '479 and '510 Patents are directed to a method (i.e., process), while the claims of the '720 and '375 Patents are directed to a system or product. The Court has not construed the allegedly infringed claims.

In the early 1990's, the founder of Alice, Ian Shepherd, invented an "innovative trading platform" which entailed a "computerized system for the establishment, settlement, and administration of financial instruments, principally of basic derivatives, that would solve problems inherent in the way such trading had been done in the past." Alice Mem in Supp. of Mot. for Summ. J. & Opp'n [Dkts. ## 95, 96] 4 ("Alice Mem."). One aspect of the trading platform is "an automated method and system for eliminating counter-party risk when parties who were often unknown to each other and in different time zones wanted to exchange payments." *Id.* The "electronic settlement mechanism [] settled trades without the risk that one party would perform and the other would not." *Id.* Alice's expert, Paul Ginsberg, explains that the Patents "disclose and claim in various ways a novel computerized trading platform for exchanging obligations in which a trusted third party, running a computer system programmed in a specific way, settles parties' obligations so as to eliminate what is variously referred to as 'Herstatt,' 'counterparty,' or 'settlement' risk—the risk that only one party's obligation will be paid, leaving the other party without its principal." *Id.* 4–5 (citing Alice Mem., [Ex. 1] Ginsberg Decl. ¶¶ 23–24). "The trusted third party—a 'supervisory institution'—operates a data processing system that exchanges both parties' obligations or neither." *Id.* at 5.

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Mr. Ginsberg elucidates the risk the Patents are intended to mitigate. "When obligations arise from a trade made between two parties, e.g., a trade of stock or a trade of foreign currency, typically, there is a gap in time between when the obligation arises and when the trade is 'settled.'" Ginsberg Decl. ¶ 21. "In a number of financial contexts, the process of exchanging obligations, or settlement, is separate from the process of entering into a contract to perform a trade." *Id*. Mr. Ginsberg provides the example of two banks that wish to exchange large sums of currency would normally enter into a binding agreement to make an enumerated exchange but would postpone the actual exchange until after the price is set and the agreement confirmed, which is typically a two day period. *Id*. ¶ 22. After two days, the two banks would "settle" the trade by both paying their predetermined amounts to the other bank. However, a risk exists that one bank might wire its money, but the second bank would fail to do the same; the loss possibly becoming permanent, for instance, if the second bank thereafter goes bankrupt or is shut down by regulators. *Id*. ¶ 23. The Patent claims at issue here seek to minimize this "settlement" risk that only one side of a trade would be fulfilled during the settlement process. *Id*. "Generally speaking, a trusted third party might operate a computer system that is configured in a particular way to exchange the parties' obligations, and by performing the particular electronic method using that computer system, can lessen settlement risk." *Id*. ¶ 24.

Therefore, Mr. Ginsberg reads the asserted claims of the four Patents to be "generally directed to methods or systems that help lessen settlement risk using a computer system." *Id*. Very broadly speaking, the process claims are directed to methods of exchanging financial obligations between parties while the system claims relate to data processing systems to implement the steps of exchanging obligations and the computer product claims enable a computer to send a transaction to

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JA4

the system to be implemented and allow a user to view the steps of exchanging obligations being

performed.

1. '479 Patent

The '479 Patent is entitled "Methods and Apparatus Relating to the Formulation and

Trading of Risk Management Contracts." *See* CLS Mem. in Supp. of Mot. for Summ. J. [Dkt. # 94]

("CLS Mem."), [Ex. 1] '479 Patent. The application for the '479 Patent was filed on May 28, 1993,

and the Patent issued on October 19, 1999. The '479 Patent, at large, allegedly "discloses a complex

computer-based system and various electronic methods for formulating risk management contracts,

trading the contracts, and exchanging the resulting obligations." Ginsberg Decl. ¶ 25. The

specification discloses:

> The invention encompasses methods and apparatus enabling the management of risk relating to specified, yet unknown, future events by enabling entities (parties) to reduce their exposure to specified risks by constructing compensatory claim contract orders on yet-to-be-identified counter-parties, being contingent on the occurrence of the specified future events. The entities submit such orders to a 'system' which seeks to price and match the most appropriate counter-party, whereupon matched contracts are appropriately processed through to their maturity. Therefore, the invention enables parties to manage perceived risk in respect of known, yet non-predictable, possible future events.

'479 Patent, col. 3:29–42. The disclosure of the '479 Patent reveals an invention that, as a whole,

appears to be directed to a seemingly complex trading platform which facilitates a wide array of

parties to come together and enter into contracts to hedge against future risks of all sorts; the system

allows parties to trade such contracts already entered into, the system manages contracts until

maturity, and the system provides for the transfer or exchange of entitlements or payments once they

arise.

Only claims 33 and 34 of the '479 Patent are at issue in this matter. These two claims are directed to a "method of exchanging obligations" between parties, and in their entirety, they claim:

> 33. A method of exchanging obligations as between parties, each party holding a credit record and a debit record with an exchange institution, the credit records and debit records for exchange of predetermined obligations, the method comprising the steps of:
>
>> (a) creating a shadow credit record and a shadow debit record for each stakeholder party to be held independently by a supervisory institution from the exchange institutions;
>>
>> (b) obtaining from each exchange institution a start-of-day balance for each shadow credit record and shadow debit record;
>>
>> © for every transaction resulting in an exchange obligation, the supervisory institution adjusting each respective party's shadow credit record or shadow debit record, allowing only these transactions that do not result in the value of the shadow debit record being less than the value of the shadow credit record at any time, each said adjustment taking place in chronological order; and
>>
>> (d) at the end-of-day, the supervisory institution instructing ones of the exchange institutions to exchange credits or debits to the credit record and debit record of the respective parties in accordance with the adjustments of the said permitted transactions, the credits and debits being irrevocable, time invariant obligations placed on the exchange institutions.
>
> 34. The method as in claim 33, wherein the end-of-day instructions represent credits and debits netted throughout the day for each party in respect of all the transactions of that day.

'479 Patent, col. 65:23–54. Both claims recite a "shadow credit record," a "shadow debit record," and a "transaction." *See, e.g., id.* col. 65:27, 33 (Claim 33).

The methods in claims 33 and 34 relate to just one feature of the entire invention

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disclosed in the '479 Patent, *see* Ginsberg Decl. ¶ 26; a concluding step of sorts, when contracted-for

obligations become ripe and are exchanged. *See* '479 Patent, col. 5:61–63 (noting the invention

"also encompasses apparatus and method dealing with the handling of contracts at maturity, and

specifically the transfer of entitlement"). The '479 Patent was the first of the Patents to issue and

the inventions disclosed by the '510, '720, and '375 Patents are continuations of the '479 Patent

which, with only minor differences, share a common specification. *See* Ginsberg Decl. ¶ 25; Alice

Mem. 4.

2. '510 Patent

The '510 Patent is entitled "Methods of Exchanging an Obligation." *See* CLS Mem.,

[Ex. 2] '510 Patent. The application for the '510 Patent was filed on May 9, 2000, and it issued on

June 28, 2005. Each of the 75 claims of the '510 Patent is directed to a particular method of

exchanging an obligation. For instance, claim 1 of the '510 Patent is directed to:

> 1. A method of exchanging an obligation between parties, wherein an exchange obligation is administered by a supervisory institution, and wherein at least one credit record and one debit record is maintained with an exchange institution, the method comprising:
>
> > (a) maintaining a shadow credit record and a shadow debit record for a party to be held independently by the supervisory institution from the exchange institution;
> >
> > (b) for every transaction resulting in an exchange obligation, the supervisory institution electronically adjusting said shadow credit record and/or shadow debit record, allowing only those transactions that do not result in a value of said shadow debit record being less than a value of said shadow credit record; and
> >
> > © at the end of a period of time, the supervisory institution providing an instruction to the exchange institution to credit and/or debit in accordance with said adjustments of said

allowed transactions, wherein said instruction being an irrevocable, time invariant obligation placed on the exchange institution.

'510 Patent, col. 64:2–21. Each of the five independent claims—claims 1, 27, 61, 65, and 68—of the '510 Patent calls for "electronically adjusting" records or accounts. *Id.* col. 64:11–12 (Claim 1); *id.* col. 65:25–26 (Claim 27); *id.* col. 66:63–64 (Claim 61); *id.* col. 67:24–25 (Claim 65); *id.* col. 68:7 (Claim 68).

An exchange of obligations, however defined, is the stated purpose of the methods claimed in the '510 Patent claims and claims 33 and 34 of the '479 Patent. Alice argues that claims 33 and 34 of the '479 Patent and every claim of the '510 Patent are implemented electronically using a computer coupled to a data storage method. *See* Ginsberg Decl. ¶¶ 28–43. CLS disputes that these methods directly or indirectly claim the use of a computer.

3. '720 Patent

The '720 Patent is entitled "Systems for Exchanging an Obligation." CLS Mem., [Ex. 3] '720 Patent. The application for the '720 Patent was filed on December 31, 2002, and it issued on December 12, 2006. Each claim of the '720 Patent, claims 1–84, is directed to a particular data processing system.

As a representative example, claim 1 of the '720 Patent is directed to:

1. A data processing system to enable the exchange of an obligation between parties, the system comprising:

> (a) data storage unit having stored therein information about a shadow credit record and shadow debit record for a party, independent from a credit record and debit record maintained by an exchange institution; and

> (a) [sic] computer, coupled to said data storage unit, that is

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> configured to (a) receive a transaction; (b) electronically
> adjust said shadow credit record and/or said shadow debit
> record in order to effect an exchange obligation arising from
> said transaction, allowing only those transactions that do not
> result in a value of said shadow debit record being less than
> a value of said shadow credit record; and © generate an
> instruction to said exchange institution at the end of a period
> of time to adjust said credit record and/or said debit record in
> accordance with the adjustment of said shadow credit record
> and/or said shadow debit record, wherein said instruction
> being an irrevocable, time invariant obligation placed on said
> exchange institution.

'720 Patent, col. 65:42–61. Each of the six independent claims—claims 1, 28, 60, 64, 68, and 80—

of the '720 Patent recites "a data storage unit having stored therein" information about accounts or

records, and a "computer, coupled to said data storage unit," that is "configured" to perform certain

steps. *See id.* col. 65:42–61 (Claim 1); *id.* col. 67:1–18 (Claim 28); *id.* col. 68:33–53 (Claim 60);

id. col. 68:62–66 & col. 69:1–11 (Claim 64); *id.* col. 69:20–42 (Claim 68); *id.* col. 70:20–37 (Claim

80).

4. '375 Patent

The '375 Patent is entitled "Systems and Computer Program Products for Exchanging

an Obligation." CLS Mem., [Ex. 4] '375 Patent. The application leading to the '375 Patent was

filed on June 27, 2005, and it issued on May 25, 2010. Claims 1–38 and 42–47 of the '375 Patent

are directed to data processing systems which enable the exchange of an obligation. As with the

'720 Patent claims, the three independent system claims—claims 1, 14, and 26—of the '375 Patent

each requires "a data storage unit having stored therein" information about accounts or records, and

a "computer, coupled to said data storage unit," that is "configured" to perform certain steps. *See*

'375 Patent, col. 65:1–30 (Claim 1); *id.* col. 66:1–29 (Claim 14); *id.* col. 66:61–65 & col. 67:1–26

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(Claim 26). The '375 Patent incorporates additional elements to the systems claimed in the '720 Patent. For instance, independent claim 1 further recites a "first party device," *id.* col. 65:4, claim 12 adds a "second party device," *id.* col. 65:62, and claim 14 recites a "communications controller." *Id.* col. 66:3.

Independent claim 39 and claims 40 and 41, which depend from claim 39,[1] of the '375 Patent are, on the other hand, directed to computer program products containing particular program code.

Claim 39 of the '375 Patent is directed to:

> 39. A computer program product comprising a computer readable storage medium having computer readable program code embodied in the medium for use by a party to exchange an obligation between a first party and a second party, the computer program product comprising:
>
>> program code for causing a computer to send a transaction from said first party relating to an exchange obligation arising from a currency exchange transaction between said first party and said second party; and
>>
>> program code for causing a computer to allow viewing of information relating to processing, by a supervisory institution, of said exchange obligation, wherein said processing includes (1) maintaining information about a first account for the first party, independent from a second account maintained by a first exchange institution, and information about a third account for the second party, independent from

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[1] "[A] claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers." 35 U.S.C. § 112. In other words, a dependent claim incorporates all of the limitations of the claim from which it "depends" and adds something new; thus, a dependent claim has a narrower scope than the claim from which it depends. Further, "the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005).

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a fourth account maintained by a second exchange institution;
(2) electronically adjusting said first account and said third
account, in order to effect an exchange obligation arising from
said transaction between said first party and said second party,
after ensuring that said first party and/or said second party
have adequate value in said first account and/or said third
account, respectively; and (3) generating an instruction to said
first exchange institution and/or said second exchange
institution to adjust said second account and/or said fourth
account in accordance with the adjustment of said first
account and/or said third account, wherein said instruction
being an irrevocable, time invariant obligation placed on said
first exchange institution and/or said second exchange
institution.

Id. col. 68:5–35. Thus, each of the three product claims asserts a "computer readable storage

medium" and "computer readable program code embodied in the medium." *Id.* col. 68:5–7 (Claim

39).

B. Procedural History

On May 24, 2007, CLS brought suit against Alice, seeking a declaratory judgment

of non-infringement, patent invalidity, and patent unenforceability under the Patent Act, 35 U.S.C.

§ 1 *et seq.*, and the Declaratory Judgment Act, 28 U.S.C. §§ 2201, 2202. On August 16, 2007, Alice

counter claimed that CLS was infringing three of its patents: the '479, '510, and '720 Patents. By

agreement of the parties, initial discovery commenced on the question of (1) the operation of CLS

Bank International, and (2) CLS Bank International's relationship with the CLS system.

In March 2009, CLS moved for summary judgment on the basis that (a) any patent

infringement by CLS could not be said to be occurring within the United States and (b) Alice's

claims lacked patentable subject matter eligibility. Alice opposed and cross-moved on both issues.

As for extraterritoriality, on October 13, 2009, the Court denied CLS's motion, finding that U.S.

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patent laws reached CLS's alleged infringing acts since CLS both "uses" its CLS Core System and "offers to sell, or sells" its methods within the United States. The Court also denied without prejudice Alice's cross-motion as premature since it sought a declaration of infringement. *See* Redacted Mem. Op. & Order [Dkt. ## 79, 78]. The Court then certified CLS's immediate appeal, but the United States Court of Appeals for the Federal Circuit denied CLS's request for an interlocutory appeal. *See* Federal Circuit Order [Dkt. # 87].

On June 16, 2009, the Court denied without prejudice the cross-motions on subject matter eligibility on the grounds that the Supreme Court had granted certiorari in *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) (en banc) (*"Bilski I"*), upon which the parties had relied heavily in their briefing. The Court ordered re-filing for after the Supreme Court issued its decision. *See* Minute Entry Order 6/16/2009. After the Supreme Court issued *Bilski v. Kappos*, 130 S. Ct. 3218 (2010) (*"Bilski II"*), the parties renewed their briefs. Further, on August 5, 2010, the Court granted Alice leave to file an amended answer containing an additional counterclaim charging CLS with infringement of its '375 Patent, which had only been issued three months prior. Briefing on the question of whether Alice's claims at issue in this litigation are directed to patent eligible subject matter under the Patent Act is now ripe, after oral argument was held on January 14, 2011.

II. LEGAL STANDARD

A. Summary Judgment

Under Rule 56 of the Federal Rules of Civil Procedure, summary judgment shall be granted "if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgement as a matter of law." Fed. R. Civ. P. 56(a); *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247 (1986). Moreover, summary judgment is properly granted against a party who

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"after adequate time for discovery and upon motion . . . fails to make a showing sufficient to establish the existence of an element essential to that party's case, and on which that party will bear the burden of proof at trial." *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986).

In ruling on a motion for summary judgment, the court must draw all justifiable inferences in the nonmoving party's favor and accept the nonmoving party's evidence as true. *Anderson*, 477 U.S. at 255. A nonmoving party, however, must establish more than "the mere existence of a scintilla of evidence" in support of its position. *Id.* at 252. In addition, the nonmoving party may not rely solely on allegations or conclusory statements. *Greene v. Dalton*, 164 F.3d 671, 675 (D.C. Cir. 1999). Rather, the nonmoving party must present specific facts that would enable a reasonable jury to find in its favor. *Id.* at 675. If the evidence "is merely colorable, or is not significantly probative, summary judgment may be granted." *Anderson*, 477 U.S. at 249-50 (citations omitted).

B. Subject Matter Eligibility under the Patent Act

Section 101 of the Patent Act delineates which inventions are patentable: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. Congress created four independent categories of inventions or discoveries that are eligible for patent protection: processes, machines, manufactures, and compositions of matter. A "process" is defined in the Patent Act as a "process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material." *Id.* § 100(b). The Supreme Court has described a "process" as follows:

That a process may be patentable, irrespective of the particular form

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of the instrumentalities used, cannot be disputed. . . . A process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing. If new and useful, it is just as patentable as is a piece of machinery. In the language of the patent law, it is an art. The machinery pointed out as suitable to perform the process may or may not be new or patentable; whilst the process itself may be altogether new, and produce an entirely new result. The process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be of secondary consequence.

Diamond v. Diehr, 450 U.S. 175, 182–83 (1981) (quoting *Cochrane v. Deener*, 94 U.S. 780, 787–88 (1877)).

By writing § 101 in expansive terms, "Congress plainly contemplated that the patent laws would be given wide scope." *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980). "Congress took this permissive approach to patent eligibility to ensure that ingenuity should receive a liberal encouragement." *Bilski II*, 130 S. Ct. at 3225 (internal quotation marks omitted); *In re Comiskey*, 554 F.3d 967, 977 (Fed. Cir. 2009) (recognizing that patentable subject matter under § 101 is "extremely broad"). In fact, the Supreme Court has "more than once cautioned that courts should not read into the patent laws limitations and conditions which the legislature has not expressed." *Bilski II*, 130 S. Ct. at 3226 (quoting *Diehr*, 450 U.S. at 182 (internal quotation marks omitted)).

The Supreme Court has enunciated three exceptions to the Patent Act's broad subject matter eligibility framework: "laws of nature, physical phenomena, and abstract ideas." *Bilski II*, 130 S. Ct. at 3225 (quoting *Chakrabarty*, 447 U.S. at 309). Thus, even if an invention appears to nominally claim subject matter that would be statutorily covered by the Patent Act, it will be denied patent protection if it falls into one of the "fundamental principles" exceptions, i.e. a law of nature, natural phenomena, and/or an abstract idea, which have been expounded by the Supreme Court in

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Gottschalk v. Benson, 409 U.S. 63 (1972), *Parker v. Flook*, 437 U.S. 584 (1978), *Diehr*, 450 U.S. 175, and most recently *Bilski II*, 130 S. Ct. 3218. An underlying reason for these exceptions is that "[p]henomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work." *Benson*, 409 U.S. at 67; *accord Diehr*, 450 U.S. at 185 ("A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.") (citation omitted). Although the "fundamental principles" exceptions are not statutory, the Supreme Court has found them to be consistent with the requirement that a patentable invention be "new and useful." *Bilski II*, 130 S. Ct. at 3225 (citing 35 U.S.C. § 101). The Supreme Court recently emphasized that a lower court should be attentive to the "guideposts" of *Benson, Flook*, and *Diehr* when considering these exceptions to subject matter patentability. *Id.* at 3231.

In 1972, the *Benson* Court held that a method of programming a computer to convert binary-coded decimal numerals to their equivalent pure binary numerals was not a "process" as covered by the Patent Act. The Court found the method truly claimed an "algorithm," as it represented a general formulation for computers to solve the mathematical problem of converting one numerical representation to another, which merely constituted an algorithm from which specific applications could be developed. *Benson*, 409 U.S. at 65. The Court held that the *Benson* patent would preempt the use of the algorithm by others as the claim could cover known and future unknown uses of the code conversion formula in many different fields and for many different purposes, and effectively preempt its use in existing machinery, future-devised machinery, or no machinery at all. *Id.* at 68. The Court also found that the computer failed to limit the invention since the algorithm had no practical application except in connection with a computer; therefore a patent

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on the invention served as a patent on the algorithm itself. *Id.* at 71–2.

In 1978, the *Flook* Court rejected another patent because it was directed to unpatentable subject matter, another algorithm, although the patent contained greater limitations and entailed a more specific application than the patent in *Benson*. The *Flook* patent concerned monitoring conditions during catalytic conversion processes in the petrochemical and oil-refining industries, and the claims were directed to a method of computing an alarm limit, which is the point at which catalytic conversion conditions can produce inefficiencies or danger. The Court recognized that the only novel part of the method was that it employed a new mathematical formula for calculating and/or updating the alarm limit, and that the invention really claimed the algorithm itself. *Flook*, 437 U.S. at 585–86. That the claims were limited to the petrochemical and oil-refining industries and would therefore not preempt the wholesale use of the algorithm was insufficient to render the claims patentable. *Id.* at 589–90. Likewise, the methods were not saved by the "post-solution" activity of adjusting the actual alarm limit based on the results of the algorithm since a "competent draftsman could attach some form of post-solution activity to almost any mathematical formula." *Id.* at 590.

In 1981, the Supreme Court colored the outer limits of the fundamental principles exceptions in *Diehr*, in which the Court upheld the subject matter eligibility of a claim to a process for producing cured synthetic rubber products. While the invention employed a well-known mathematical formula in one of its steps, the patent did not seek to preempt the use of the formula itself, but only preempt its use in conjunction with all the other steps in the claimed method. *Diehr*, 450 U.S. at 187. Admittedly, the mathematical formula would not be patentable on its own, "but when a process for curing rubber is devised which incorporates in it a more efficient solution of the

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equation, that process is at the very least not barred at the threshold by § 101." *Id.* at 188. The Court

distinguished *Flook* by explaining: "We were careful to note in *Flook* that the patent application did

not purport to explain how the variables used in the formula were to be selected, nor did the

application contain any disclosure relating to chemical processes at work or the means of setting off

an alarm or adjusting the alarm limit. All the application provided was a 'formula for computing an

updated alarm limit.'" *Id.* at 192 n.14 (internal citations omitted).

Most recently, in 2010, the Supreme Court found a business method unpatentable as

directed to an abstract idea. *See Bilski II*, 130 S. Ct. at 3231. The *Bilski II* Court invalidated process

claims generally directed to instructing buyers and sellers how to hedge risk and how to apply the

methods to the energy commodities market. *Id.* The Court pointed out that hedging is a

"fundamental economic practice long prevalent in our system of commerce and taught in any

introductory finance class." *Id.* (citation omitted). "Allowing petitioners to patent risk hedging

would pre-empt use of this approach in all fields, and would effectively grant a monopoly over an

abstract idea." *Id.* The Court also found the dependent claims applying the methods of hedging risk

to the energy commodities market unpatentable as vain attempts to limit an fundamental concept to

a particular field of use or to add post-solution components. *Id.* The Court found that the patent

claims "attempt to patent the use of the abstract idea of hedging risk in the energy market and then

instruct the use of well-known random analysis techniques to help establish some of the inputs into

the equation." *Id.* In fact, "these claims add even less to the underlying abstract principle than the

invention in *Flook* did, for the *Flook* invention was at least directed to the narrower domain of

signaling dangers in operating a catalytic converter." *Id.*

While an abstract idea in itself is not patentable, a claim "is not unpatentable simply

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because it contains a law of nature or a mathematical algorithm." *Flook*, 437 U.S. at 590. "It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection." *Diehr*, 450 U.S. at 187 (emphasis in original); *id.* at 192 ("[W]hen a claim containing a mathematical formula implements or applies that formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect (e.g., transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of § 101."). It is also clear that when a court examines whether a claim is directed to an abstract idea, the court must view each claim as a whole. "In determining the eligibility of respondents' claimed process for patent protection under § 101, their claims must be considered as a whole . . . This is particularly true in a process claim because a new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made." *Diehr*, 450 U.S. at 188; *see also King Pharms., Inc. v. Eon Labs., Inc.*, 616 F.3d 1267, 1277 (Fed. Cir. 2010) (reasserting that "§ 101 patentability analysis is directed to the claim as a whole, not individual limitations" within the claim).

There is no clear definition of what constitutes an abstract idea; instead, courts analogize from the standards etched out by the cases just discussed. As the Federal Circuit recently acknowledged, "the Supreme Court did not presume to provide a rigid formula or definition for abstractness." *Research Corp. Techs. v. Microsoft Corp.*, 627 F.3d 859, 868 (Fed. Cir. 2010) (citing *Bilski II*, 130 S. Ct. at 3238). The Federal Circuit declined to "presume to define 'abstract' beyond the recognition that this disqualifying characteristic should exhibit itself so manifestly as to override the broad statutory categories of eligible subject matter and the statutory context that directs primary

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attention on the patentability criteria of the rest of the Patent Act." *Id.*

Ultimately, the determination of whether an asserted claim is invalid for lack of subject matter patentability under § 101 is a question of law. *See Bilski I*, 545 F.3d at 950. A patent is presumed to be valid by statute, 35 U.S.C. § 282; therefore, a patent challenger bears the burden of proving invalidity by clear and convincing evidence. *See Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1359 (Fed. Cir. 2007). This standard of proof applies equally at summary judgment. *See National Presto Indus. v. West Bend Co.*, 76 F.3d 1185, 1189 (Fed. Cir. 1996). While invalidity is a question of law, "determination of this question may require findings of underlying facts specific to the particular subject matter and its mode of claiming." *Arrhythmia Research Technology, Inc. v. Corazonix Corp.*, 958 F.2d 1053, 1056 (Fed. Cir. 1992).

Whether an invention falls within a subject matter eligible for § 101 protection is also a threshold question. *See Comiskey*, 554 F.3d at 975. "It is well-established that '[t]he first door which must be opened on the difficult path to patentability is § 101.'" *Id.* at 973 (quoting *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1372 n.2 (Fed. Cir. 1998)). Only after an invention has satisfied § 101, will it be analyzed under the remaining hurdles of the Patent Act, which include the requirement that an invention be novel, *see* § 102; nonobvious, *see* § 103; and fully and particularly described, *see* § 112. *See Bilski II*, 130 S. Ct. at 3225.[2]

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[2] The Federal Circuit recently explained, in overturning a district court's finding that a method claim was abstract, that

> an invention which is not so manifestly abstract as to over-ride the statutory language of section 101 may nonetheless lack sufficient concrete disclosure to warrant a patent. In section 112, the Patent Act provides powerful tools to weed out claims that may present a vague or indefinite disclosure of the invention. Thus, a patent that presents a process sufficient to pass the coarse eligibility filter may

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III. ANALYSIS

CLS argues that Alice's claims are not patentable because they are directed to an abstract idea—the exchange of an obligation when sufficient value is present—which is supported by its argument that the method claims fail to satisfy the machine-or-transformation test. Thus, CLS posits that Alice's method claims in the '510 Patent and claims 33 and 34 of the '479 Patent are directed to an abstract idea, and then by the draftsman's art, this abstract idea is recast as computer system and product claims in the '720 and '375 Patents to carry out the same methods. CLS argues this is further evidenced by the fact the Patents share essentially the same specification and disclosure.

A. Method Claims

CLS first attacks claims 33 and 34 of the '479 Patent and every claim of the '510 Patent—which collectively entail the only method claims at issue in this litigation—arguing these method claims fail as abstract and because they fail to meet the machine-or-transformation test. Alice responds that the methods are not abstract, but a functional application of a method to satisfy a need, and that the claims further satisfy the machine-or-transformation test.

1. Statutory Category

The first question is whether the methods in claims 33 and 34 of the '479 Patent and

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nonetheless be invalid as indefinite because the invention would 'not provide sufficient particularity and clarity to inform skilled artisans of the bounds of the claim.' *Star Scientific., Inc. v. R.J. Reynolds Tobacco Co.*, 537 F.3d 1357, 1371 (Fed. Cir. 2008). That same subject matter might also be so conceptual that the written description does not enable a person of ordinary skill in the art to replicate the process.

Research Corp., 627 F.3d at 869.

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all claims in the '510 Patent statutorily qualify for patent protection. Congress broadly defined the

categories of inventions to be afforded patent protection to ensure that "ingenuity should receive a

liberal encouragement." *Chakrabarty*, 447 U.S. at 308–09. The Patent Act defines "process" as a

"process, art or method, and includes a new use of a known process, machine, manufacture,

composition of matter, or material." 35 U.S.C. § 100(b). The relevant claims of the '479 and '510

Patents are directed to particular methods, or steps, of exchanging obligations. Thus, the claims

nominally satisfy the statutory language of § 101 and the process definition laid out in § 100(b).

However, the analysis does not end here as the machine-or-transformation test helps guide a court

in the decision as to whether a process is subject matter eligible under the Patent Act.

2. Machine-or-Transformation Test

To determine whether a process claims subject matter that is patent eligible, a court

may look to the useful and important "machine-or-transformation" ("MOT") test for guidance. *See*

Prometheus Labs., Inc. v. Mayo Collaborative Servs. & Mayo Clinic Rochester, No. 2008-1403,

2010 U.S. App. LEXIS 25956, *19–20 (Fed. Cir. Dec. 17, 2010). Under the MOT test, an invention

is a process if "(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular

article into a different state or thing." *Bilski I*, 545 F.3d at 954. Further, "the use of a specific

machine or transformation of an article must impose meaningful limits on the claim's scope to

impart patent-eligibility" and "the involvement of the machine or transformation in the claimed

process must not merely be insignificant extra-solution activity." *Id.* at 961–62. The MOT test is

neither the exclusive nor the dispositive standard to determine whether an invention qualifies as a

process under § 101, yet it remains a "useful and important clue, an investigative tool" in the

analysis. *Bilski II*, 130 S. Ct. at 3227. Therefore, this Court analyzes the claims under the MOT

analysis to inform its ultimate finding.

The Court first finds the relevant claims of the '479 and '510 Patents do not involve any "transformation" under the MOT test. Alice argues that the electronic transformation of data caused by the methods' electronic adjustment of accounts satisfies the transformation prong of the test. *See* Alice Mem. 33. The Federal Circuit recently grappled with its "measured approach" to allowing the manipulation of electronic signals or data or even "abstract constructs," such as legal obligations, to qualify as transformations under the Patent Act. *Bilski I*, 545 F.3d at 962. The Federal Circuit pointed to only one example where "the electronic transformation of the data itself into a visual depiction" was sufficient to meet the test. *Id.* at 963 (citing *In re Abele*, 684 F.2d 902, 908–09 (C.C.P.A. 1982)). It was not the mere manipulation of data itself that led the U.S. Court of Customs and Patent Appeals (the predecessor to the U.S. Court of Appeals for the Federal Circuit) to find the method was transformative, but that the process involved the conversion of X-ray data into a visual depiction which represented specific physical objects, i.e., bones. *See Bilski I*, 545 F.3d at 962–63.[3] Taken to the extreme, Alice's argument would convert almost any use of a computer,

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[3] Alice cites to *Arrhythmia Research Technology, Inc. v. Corazonix Corp.*, 958 F.2d 1053 (Fed. Cir. 1992), as further support that the method claims before the Court involve a transformation under the MOT test. In *Arrhythmia* the Federal Circuit found the conversion, application, determination, and comparison of electrocardiograph signals to be "physical process steps that transform one physical, electrical signal into another" and, accordingly that the process satisfied the second step of the *Freeman-Walter-Abele* test—which requires that an algorithm be applied to physical elements or process steps to be patent eligible. *Id.* at 1059. This analysis is inapposite. First, the Federal Circuit's analysis was not related to the MOT test. Second, the Circuit has since found the *Freeman-Walter-Abele* test to be an inadequate indicator of subject matter patentability and has warned that portions of prior decisions relying solely on this test should no longer be relied upon. *Bilski I*, 545 F.3d at 959 n.17. The *Bilski I* Court clarified that "the proper inquiry under § 101 is not whether the process claim recites sufficient "physical steps," but rather whether the claim meets the machine-or-transformation test." *Id.* at 961 (referring to the 'physical steps' test developed in *In re Comiskey*, 499 F.3d 1365 (Fed. Cir. 2007)).

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or other electronic device with memory, to a transformation under the MOT test simply because data

would necessarily have to be manipulated, and on a microscopic level, a hard drive, for instance,

would be "transformed" by the process of "mangnetizing or demagnetizing part of a hard disk drive

platter corresponding to a bit of data." *See* Alice Mem. 33.

Further, for a transformation to satisfy the MOT test, the "transformation must be

central to the purpose of the claimed process." *Bilski I*, 545 F.3d at 962. Assuming the asserted

process claims in the Patents are implemented by computer, the claims are nonetheless directed to

"a method of exchanging obligations," not to the manipulation of an electronic hard drive or

memory, and any such electronic transformation is at most incidental to the exchange of obligations,

not to mention it would also constitute insignificant extra-solution activity. Further, the exchange

of "obligations" itself involves no particular article being transformed since obligations are a mere

abstraction. "Purported transformations or manipulations simply of public or private legal

obligations or relationships, business risks, or other such abstractions cannot meet the test because

they are not physical objects or substances, and they are not representative of physical objects or

substances." *Bilski I*, 545 F.3d at 963.[4] The method claims before the Court, that is, every claim of

the '510 Patent and claims 33 and 34 of the '479 Patent, fail to transform any article under the

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[4] Similarly, a district court found a method directed towards discovering credit card fraud did
not meet the transformation prong of the MOT test, despite the manipulation of credit information,
because no article or physical object was transformed. The credit card number and the card itself
were found to represent merely "a common underlying abstraction–a credit card account, which is
a series of rights and obligations" existing between the account holder and card issuer. *Cybersource
Corp. v. Retail Decisions, Inc.*, 620 F. Supp. 2d 1068, 1074 (N.D. Cal. 2009). Although the credit
card information manifests in a physical credit card, the district court noted: "Options like those
described in the *Bilski* patent do not simply float in the ether. A piece of paper upon which the terms
of an option are written is, like a credit card, a physical object. Yet this connection to a physical
medium does not create patent eligibility, because an option ultimately represents the abstraction of
a legal obligation or business risk." *Id.*

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machine-or-transformation test.

The closer question is whether Alice's process claims are tied to a particular machine or apparatus under the MOT test. A "machine" is a "a concrete thing, consisting of parts, or of certain devices and combination of devices." *In re Nuijten*, 500 F.3d 1346, 1355 (Fed. Cir. 2007) (quoting *Burr v. Duryee*, 68 U.S. (1 Wall.) 531, 570 (1863)). The Court first looks to the '510 Patent claims, each of which recites "electronically adjusting" records and/or accounts as a step within the claim.[5] The Court has yet to construe the terms of these claims, but CLS concedes for purposes of these motions that the recitation of "electronically adjusting" by each of the '510 Patent claims means that the claims require the use of a computer. CLS Opp'n & Reply in Supp. of Mot. for Summ. J. [Dkt. ## 97, 98] ("CLS Reply") at 11 n.6.

The Court will also presume, for purposes of these motions, that claims 33 and 34 of the '479 Patent are directed to computer implementation, a position CLS contests. To be sure, claims 33 and 34 of the '479 Patent contain no unambiguous reference to a machine or apparatus. Alice posits that a person of ordinary skill in the relevant art reading these claims in light of the specification and other claims of the '479 Patent would understand the term "transaction" to require the use of electronic data processing systems, *see* Alice Reply in Supp. of Mot. for Summ. J. [Dkt. # 99] ("Alice Reply") 23, and the terms "shadow credit record" and "shadow debit record" to require electronic storage of data files in a data storage unit. *Id.* (citing Ginsberg Decl. ¶ 32); *see also* '479 Patent, col. 65:27, 33 (Claim 33). At a minimum, Alice argues that claims 33 and 34 are directed to implementation by a computer system including a processor and memory. *See* Alice Mem. 31;

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[5] *See* '510 Patent, col. 64:11–12 (Claim 1); *id.* col. 65:25–26 (Claim 27); *id.* col. 66:63–64 (Claim 61); *id.* col. 67:24–25 (Claim 65); *id.* col. 68:7 (Claim 68) (collectively, the five independent claims of the '510 Patent).

see also Ginsberg Decl. ¶ 43 (noting that the process claims "expressly recite methods of performing a particular transaction electronically, which requires (explicitly or implicitly) the use of a computer system").

Whether a claim is valid under § 101 is a matter of claim construction, *see State Street*, 149 F.3d at 1370, and for purposes of these motions, CLS has agreed to assume a construction of terms favorable to Alice.[6] The specification for the '479 Patent reveals that the invention entails systems and methods to be realized through the use of a computer with specific programming. *See, e.g.*, '479 Patent, col. 4:24–42; *see also* Ginsberg ¶ 29 ("The entire patent is directed to computer systems and the software applications, e.g., 'CONTRACT APPS,' needed to perform the methods described in the patent."). However, claims 33 and 34 are independent of the broader, more intricate trading platform system revealed in the specification and claimed by the '479 Patent. However, because the relevant terms of claims 33 and 34 of the '479 Patent have yet to be construed, because CLS has agreed to a broad construction of terms favorable to Alice, and because the specification reveals a computer-based invention, the Court can reasonably assume for present purposes that the terms "shadow" credit and/or debit record and "transaction" in the '479 Patent recite electronic implementation and a computer or an analogous electronic device.

The single fact that Alice's method claims are implemented by computer does not mean the methods are tied to a particular machine under the MOT test. The requirement that shadow

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[6] To have the Court consider CLS's § 101 defense before conducting a possible *Markman* hearing, *see Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996), CLS agreed to assume a construction of claims favorable to Alice. *See, e.g.*, Alice Mem., [Ex 6] Tr. of Aug. 6, 2010 Status Conference at 12:22–25 (reflecting that counsel for CLS stated: "I will say even as to *Markman* our briefing will assume a broad construction favorable to Alice, so we're going to assume that in arguing whether this is really a patentable subject mater or not so that we can expedite that").

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accounts and/or records be adjusted electronically, or that information be stored electronically, may

not sufficiently tie the claims to a particular machine or apparatus that imposes meaningful limits

on the claims' scope. *See* CLS Reply 10. At what point does a method that is to be implemented

by computer become sufficiently tied to a *particular* computer, so that it satisfies the machine prong

of the MOT test? This question has not been clearly answered by the Federal Circuit or the Supreme

Court. *See, e.g., Bilski I*, 545 F.3d at 962 ("We leave to future cases the elaboration of the precise

contours of machine implementation, as well as the answers to particular questions, such as whether

or when recitation of a computer suffices to tie a process claim to a particular machine.").

The Court concludes that nominal recitation of a general-purpose computer in a

method claim does not tie the claim to a particular machine or apparatus or save the claim from

being found unpatentable under § 101. *See, e.g., Fuzzysharp Techs., Inc. v. 3D Labs Inc., Ltd.*, No.

07-5948, 2009 U.S. Dist. LEXIS 115493, *12 (N.D. Cal. Dec. 11, 2009) ("Courts applying *Bilski*

have concluded that the mere recitation of 'computer' or reference to using a computer in a patent

claim us [sic] insufficient to tie a patent claim *to a particular machine*.") (emphasis in original)

(referring to *Bilski I*, 545 F.3d 943); *Cf. Benson*, 409 U.S. 63 (finding method claims to be performed

on a general purpose computer to be invalid as an algorithm). On the other hand, a computer that

has been specifically programmed to perform the steps of a method may no longer be considered a

general purpose computer, but instead, a particular machine. *Cf. In re Alappat*, 33 F.3d 1526, 1545

(Fed. Cir. 1994) (finding that "a general purpose computer in effect becomes a special purpose

computer once it is programmed to perform particular functions pursuant to instructions from

program software").

With evolving guidance on this issue, district courts have determined that a method

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claim that is directed to a general purpose computer is not tied to a particular machine under the

MOT test.[7] *See, e.g., Fuzzysharp*, 2009 U.S. Dist. LEXIS 115493 at *12 ("The salient question is

not whether the claims are tied to a computer. Rather, as *Bilski* makes clear, the question is whether

the claims are tied to *a particular machine*.") (citing *Bilski I*, 545 F.3d at 961) (emphasis in original).

In *DealerTrack*, a district court found asserted claims directed to a "computer aided method" of

managing a credit application to be invalid under § 101. *DealerTrack, Inc. v. Huber*, 657 F. Supp.

2d 1152 (C.D. Cal. 2009). The court found the method at issue was not tied to a particular machine

because the patent failed to specify how the hardware and database recited were "specially

programmed" to implement the method, and the claimed central processor was "nothing more than

a general purpose computer that has been programmed in some unspecified manner." *Id.* at 1156;

see also Accenture Global Servs. GMBH v. Guidewire Software, Inc., 691 F. Supp. 2d 577, 597 (D.

Del. 2010) (suggesting that a method conducted by a "data processing system," which also claimed

a "claim folder," "display device," and "screen," was not tied to a particular computer per the MOT

test because the terms failed to "imply a specific computer having any particular programming – they

are descriptive of a general computer system at best").

The *Fuzzysharp* court also found certain method claims were not tied to a particular

machine. The claims at issue related to "reducing the indivisibility related computations in 3-D

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[7] While a few of the cases cited for this proposition were decided before the Supreme Court issued *Bilski II*, that decision did not touch upon the contours of when a method claim is tied to a particular machine or apparatus under the MOT test. The Court's decision did, of course, dethrone the MOT test as the exclusive test for process patentability under § 101. Thus, while some of these earlier lower-court decisions may have based their holdings entirely upon the results of their application of the MOT test, something against which the Supreme Court has now spoken, the analysis of these decisions as to when a method is tied to a particular machine or apparatus itself remains unaltered after *Bilski II*.

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graphics" and the district court accepted that the claims required a device such as a computer because

at least one claim recited "computer storage," and the parties agreed that certain terms required a

"computer screen." *Fuzzysharp*, 2009 U.S. Dist. LEXIS 115493 at *11–12. Nonetheless the court

found that the claims were not tied to a particular machine because they either contained only a

"passing reference to 'computer storage'" or simply made "a general[] reference to 'a' computer."

Id. at *12–15. The court noted that ultimately the challenged method claims employed algorithms

and calculations which would require a computer, but no particular computer. *Id.* at *15.[8]

To determine whether a machine is particular under the MOT test, courts also look

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[8] In light of *Bilski I* and *Bilski II*, the Board of Patent Appeals and Interferences has shown a similar inclination. *See, e.g., Ex Parte Monk*, No. 2009-013250, 2010 WL 5477256, *3 (B.P.A.I. Dec. 30, 2010) (finding claims directed to a method of monitoring credit fraud not tied to a particular machine per the MOT test because the recitation of "analysis engines and a global negative file" represented "at most, the use of a general computer" since the specification disclosed that any microprocessor based system capable of monitoring ongoing credit activity and/or authorizing activity in response could form the analysis engines, and the global negative files could be stored on any general purpose computer); *Ex Parte Kuno*, No. 2009-006896, 2010 WL 5127425, *10 (B.P.A.I. Dec. 13, 2010) ("Although the preamble of claim 1 calls for a 'processor-based' method, the body of the claim recites no structure at all, let alone a particular machine to which the recited process is tied. But even if a processor were recited in the body of the claim, such a nominal structural recitation would be a tantamount to a general purpose computer and would not tie the process to a particular machine or apparatus."); *Ex Parte Myr*, No. 2009-005949, 2009 WL 3006497, *9–10 (B.P.A.I. Sept. 18, 2009) (finding method claims unpatentable, in part, because claims which used the phrase "computer-implemented" only tied the process to "any general-purpose computer" and the recitation "method executed in a computer apparatus" is "so generic as to encompass any computing system, such that anyone who performed this method in practice would fall within the scope of these claims"); *Ex Parte Nawathe*, No. 2007-3360, 2009 WL 327520, *4 (B.P.A.I. Feb. 9, 2009) (rejecting under § 101 claims reciting a computerized method of inputting and representing XML documents since the "computerized recitation purports to a general purpose processor [] as opposed to a particular computer specifically programmed for executing the steps of the claimed method"); *but see Ex Parte Kohda*, No. 2009-006262, 2010 WL 4780565, *3 (B.P.A.I. Nov. 22, 2010) (remanding to patent examiner for further findings and suggesting that under the broadest reasonable construction the claims could be read to recite a particular apparatus under the MOT test since they claimed an electronic shopping cart—which appears to collect information on customers purchases thereby targeting advertisements the customers would see).

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to whether the machine or apparatus imposes meaningful limits on the process itself. "In order for the addition of a machine to impose a meaningful limit on the scope of a claim, it must play a significant part in permitting the claimed method to be performed, rather than function solely as an obvious mechanism for permitting a solution to be achieved more quickly, i.e., through the utilization of a computer for performing calculations." *SiRF Tech., Inc. v. ITC*, 601 F.3d 1319, 1333 (Fed. Cir. 2010). A machine meaningfully limits a method when the machine is "essential to the operation of the claimed methods." *Id.* In *SiRF Tech.*, decided before *Bilski II*, the Federal Circuit held that claimed methods for teaching a GPS receiver an improved manner in which to calculate its position were tied to a particular machine. *Id.* The Federal Circuit underscored the fact that the machine imposed meaningful limits on the methods since the methods could not be performed without the machine itself—the GPS receiver—and there was no evidence that the calculations required by the claims could be performed entirely in the human mind. *Id.* at 1332–33; *see also Cybersource Corp. v. Retail Decisions, Inc.*, 620 F. Supp. 2d 1068, 1077 (N.D. Cal. 2009) (finding a method for detecting fraud in credit card transactions over the Internet directed to unpatentable subject matter as the method was not limited to a particular machine, in part, because the process could occur offline: "To give but one example, a merchant taking an order over the telephone could use records or databases to cross-check all credit card numbers associated with that telephone number").

Similarly, in *Every Penny Counts*, a district court invalidated a method claim because it failed the MOT test. *See Every Penny Counts, Inc. v. Bank of Am. Corp.*, No. 2:07-042, 2009 U.S. Dist. LEXIS 53626 (M.D. Fla. May 27, 2009). The claim was directed to a system in which a consumer could have a portion of any credit or debit transaction set aside—that amount determined

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either by rounding up each transaction to the nearest dollar and setting aside the difference or by adding a predetermined amount to each transaction—and then have the portion routed to either the consumer's savings account, a preferred charitable organization, or a portion to each. *Id.* at *2. The district court first found the claim, categorized as a system, to be truly directed to a process since it "has no substantial practical application except in connection with computers, cash registers, and networks, but it is not comprised of those devices." *Id.* at *7 (internal quotation marks omitted). The court then found that although the process recited implementation by a "network," "entry means" and a "computing means in said network being responsive to said data," the so-described computer failed to impose a meaningful limitation on the process because the claim was essentially "a mathematical algorithm [that] uses machines for data input and data output and to perform the required calculations." *Id.* at *7.

Granting Alice's position that "claims 33 and 34 of the '479 patent are properly limited to implementations of the claim methods using a computer, just as the '510 patent requires," *see* Alice Mem. 32 n.15, the Court nonetheless finds the method claims before the Court—claims 33 and 34 of the '479 Patent and each claim of the '510 Patent—are not tied to a particular machine under the MOT test. Assuming accounts and/or records will be electronically adjusted, which requires information to be stored electronically in a data storage unit, and that an irrevocable instruction is conducted electronically, the method claims here at best recite implementation by a general-purpose computer.[9]

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[9] Alice holds up *AT&T Corp. v. Excel Commc'ns.*, 172 F.3d 1352 (Fed. Cir. 1999), and, again, *Arrhythmia* to dispute the need for a claim to recite more than a processor and a memory in order to be tied to a particular machine. However, the *Arrhythmia* Court did not conduct its analysis under the MOT test, nor did the case base its finding on the interconnectedness between a method claim and electronic equipment. The Circuit instead found the process before it was valid because

The claims before the Court at most implicitly recite a computer by claiming electronic adjustment of records or accounts.[10] This contrasts with other cases in which district courts found methods were not tied to a particular machine and were unpatentable under § 101 despite explicit recitation of hardware or computer components. *See, e.g., Every Penny*, 2009 U.S. Dist. LEXIS 53626 at *7 (reciting "network," "entry means" and "computing means in said network being responsive to said data"); *Fuzzysharp*, 2009 U.S. Dist. LEXIS 115493 at *12 (reciting "computer" and "computer storage"); *DealerTrack*, 657 F. Supp. 2d at 1153 (reciting, *inter alia*, "computer aided method" and "remote application entry and display device"); *Accenture Global Servs.*, 691 F. Supp. 2d at 597 (suggesting, but not holding, that claims reciting "data processing system," "claim folder," "display device," and "screen" were not patentable).

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it included physical process steps under the now defunct *Freeman-Walter-Abele* test. *See Arrhythmia*, 958 F.2d at 1059; *see also supra* note 3. Similarly, the Federal Circuit relied on the "useful, concrete, and tangible result" test in *AT&T* to find a process claim valid per § 101. *See AT&T Corp.*, 172 F.3d at 1358. The *Freeman-Walter-Abele* test and the "physical steps" tests were predecessors of sorts to, and superceded by, the "useful, concrete, and tangible result" test. This test has also since been rejected explicitly by the Federal Circuit and the Supreme Court. *See Bilski I*, 545 F.3d at 959–60; *id.* at 960 n.19; *In re Ferguson*, 558 F.3d 1359, 1364 (Fed. Cir. 2009) (reaffirming that the "useful, concrete, and tangible" result test has no continuing validity); *Bilski II*, 130 S. Ct. at 3231.

[10] Alice posits that the "electronic adjustment step, along with the maintenance of electronic accounts, and the generation of electronic instructions, are carried out because the computer implementing the claimed method acts as an electronic third party between two counterparties in an effort to minimize the risk that one counterparty will default." Alice Mem. 36 (citing Ginsberg Decl. ¶¶ 40–45). The claims recite a "supervisory institution" as the intermediary facilitating the exchange of obligations. *See* '479 Patent, claims 33–34; '510 Patent, claims 1–75. Alice suggests at one point that the intermediary may be a person or a company, *see* Alice Mem. 4–5 (contending that the patents disclose and claim in various ways a computerized trading platform for exchanging obligations in which "a trusted third party, running a computer system programmed in a specific way," settles the obligations and that the "the trusted third party—a 'supervisory institution'—operates a data processing system"), but even if the "supervisory institution" is a company or a computer, meaning a computer controls the entire method rather than a person implementing the steps of the method by way of computer, the claims before the Court at most implicitly recite a general purpose computer.

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To be sure, the specification of the '479 Patent, which the '510 Patent largely shares, reveals a seemingly intricate "trading platform" invention consisting of systems and methods, with apparent software applications to be used in implementing the invention. The '479 Patent specification speaks to methods being conducted by way of specifically programmed computing devices. *See, e.g.,* '479 Patent, col. 28:12–16 ("The invention has industrial application in the use of electrical computing devices and data communications. The apparatus and methods described allow the management of risk in an automated manner by means of programming of the computing devices."); '510 Patent, col. 31:66–67 & col. 32:1–3 (same). The specification undoubtedly provides context for reading a patent's claims, but the plain language of the claims themselves is the measure of the breadth of patent protection granted. *See Innova/Pure Water, Inc. v. Safari Water Filtration Sys.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004).

Alice points to unasserted claims 12 and 28 of the '479 Patent to demonstrate that if claims 33 and 34 are interpreted in context of other '479 Patent claims, it becomes clear that claims 33 and 34 also require computer implementation. *See* Ginsberg ¶¶ 30–31. The Court has accepted this proposition, however this juxtaposition reinforces the Court's conclusion that claims 33 and 34 of the '479 Patent are independent of the broader computer system revealed in the specification, and it demonstrates that the drafters of the claims of the '479 Patent knew how to explicitly recite to computer components.[11] Claim 12 discloses a detailed system which incorporates other claims,

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[11] "Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term. Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims. Differences among claims can also be a useful guide in understanding the meaning of particular claim terms." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005).

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including the computer based processing system revealed in claim 1, and additionally claims an exchange institution holding a debit and credit record, that the "data processing apparatus" be "configured" to maintain a shadow credit and debit record for each stakeholder, and the "data processing means being configured" to obtain a start-of-day balance for the shadow credit and debit records and to at the end-of-day instruct the exchange institutions to adjust their records according to the transactions performed. *See* '479 Patent, col. 61:53–67 & col. 62:1–7. Claim 28 of the '479 Patent, on the other hand, is directed to a method of exchanging obligations similar to claims 33 and 34, but recites additional elements, such as a "data processing apparatus"—incorporated from claim 18—and that an independent shadow credit and debit record be maintained and that "at the end-of-day, the data processing apparatus instructing ones of the exchange institutions" to effectuate the exchanges accordingly. *Id.* col. 64:13–40.

Therefore, even assuming a reasonable construction favorable to Alice that claims 33 and 34 of the '479 Patent and each claim of the '510 Patent recites to computer implementation, the asserted claims contain no indication that the computers, or other devices required to implement the methods, are specifically programmed. The claims make no mention of any specific hardware, let alone software or specifically programmed hardware. Alice's expert construes the claims to require "a computer configured and programmed to carry out the processes of the claims." Ginsberg Decl. ¶ 15. Alice argues the term "shadow record" refers to electronic records maintained in a data storage unit by a computer programmed with application software. Alice Reply 24. While the specification and other claims of the '479 Patent may reveal specifically programmed computers, only claims 33 and 34 of the '479 Patent and the claims of the '510 Patent are before the Court, and according to the plain language of the terms actually employed in these claims it cannot be said that

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they reasonably recite to a specifically programmed computer.

Furthermore, that the processes before the Court are conducted electronically, by way of a computer, fails to impose a meaningful limitation on the processes themselves. *See Every Penny Counts*, 2009 U.S. Dist. LEXIS 53626 at *7 (finding the computerized method required machines for data input and output, and to perform calculations, but the machines imposed no limit on the process itself). A computer may facilitate and expedite the claimed methods, however the methods before the Court could be performed without use of a computer. Alice's expert acknowledges that the methods could be performed in a non-electronic format. "In an abstract sense, it is possible to perform the business methods of maintaining accounts, and providing an instruction without a computer or other hardware." Ginsberg Decl. ¶ 40. "If someone had thought of this invention 100 years ago, they might have implemented it in a non-electronic manner using various pre-computing tools such as an abacus or handwritten ledgers." *Id.*

Looking at the methods claimed by Alice, the Court need not even engage in abstraction to contemplate how they could be implemented without the use of electronics. The method of exchanging obligations by employing an intermediary to consummate the exchange after ensuring the parties have adequate value to guarantee the exchange, perhaps by keeping an up-to-date record of the parties' abilities to honor their obligations, and then providing an irrevocable instruction to the parties—or their representative banks or other value holders—to adjust their accounts or records accordingly, does not require the use of computers. *See Ultramercial, LLC v. Hulu, LLC*, No. 09-06918, 2010 U.S. Dist. LEXIS 93453, *13 (C.D. Cal. Aug. 13, 2010) (finding a computerized method invalid, in part, because "[t]here is nothing inherently computer-specific about receiving media from a content provider, choosing a sponsor for the media, selecting an ad for

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the sponsor, verifying the viewer's activity, assigning passwords, charging the sponsor for the advertisement, or any of the remaining steps"); *see also Benson*, 409 U.S. at 67 ("The mathematical procedures can be carried out in existing computers long in use, no new machinery being necessary. And, as noted, they can also be performed without a computer."); *Flook*, 437 U.S. at 586 ("Although the computations can be made by pencil and paper calculations, the abstract of disclosure makes it clear that the formula is primarily useful for computerized calculations producing automatic adjustments in alarm settings."). Claims 33 and 34 of the '479 Patent and the claims of the '510 Patent are not meaningfully limited by a computer since a computer is not essential to the operation of the methods. *See SiRF Tech.*, 601 F.3d at 1333.

Even if computer implementation is not inherently necessary for the methods claimed, a computerized approach would indubitably expedite the exchanges. However, it is also true that simply because method claims call for computerized implementation to be usefully or pragmatically applied "does not mean, however, that the patent claims are limited to use on a computer, or, more importantly, that they are *tied* to one." *Ultramercial*, 2010 U.S. Dist. LEXIS 93453 at *13 (emphasis in original). "That the disclosed invention is only used on computers or computer networks cannot alone satisfy the machine test without rendering the test completely toothless." *Id.* It is a truism that the "the particular methods claimed in these patents only work, as intended, when carried out using a computer," Ginsberg ¶ 41, but that alone does not mean that a computer meaningfully limits the processes. For the foregoing reasons, the Court finds that claims 33 and 34 of the '479 Patent and claims 1–75 of the '510 Patent fail to satisfy the machine-or-implementation test.[12] However, even

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[12] The Court notes that there will likely soon be further guidance from the Federal Circuit on the extent of interconnectedness required between a machine and a process for the process to satisfy the MOT test as several cases this Court finds persuasive—*Every Penny, DealerTrack, Fuzzysharp,*

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if these claims were to satisfy the MOT test, the Court would still move next to analyze the claims under the abstract idea exception.

3. Abstract Idea Exception to Patentability

CLS asserts that Alice's methods, claims 33 and 34 of the '479 Patent and claims 1–75 of the '510 Patent, attempt to patent the abstract idea of "'exchanging an obligation between parties' after ensuring that there is 'adequate value' in independent accounts maintained for the parties." CLS Mem. 24. CLS analogizes the method claims to a "two-sided 'escrow' arrangement for financial transactions" and likens Alice's supposed escrow-type invention to the hedging claims that were invalidated by the Supreme Court in *Bilski II*. *Id.* at 25. Alice defends the methods as "more than a mere statement of a concept," and insists they constitute "a particular solution to a real world problem in need of solving—eliminating counterparty risk with a complicated computer system programmed to perform the settlement." Alice Mem. 34. Alice argues against abstractness in that the "performance of the method can be observed and verified; settlements are completed electronically, with accounts being electronically debited and credited." *Id.* (citing Ginsberg Decl. ¶¶ 44–45).

The claims before the Supreme Court in *Bilski II*, which the Court found to encapsulate the concept of hedging, were directed to the steps of initiating a series of transactions between a commodity provider and consumers at a fixed rate which corresponded to consumers' risk positions, identifying market participants for the commodity who had a counter-risk position, and then initiating a series of transactions at a fixed price between the commodity provider and those

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and *Ultramercial*—are all currently before the Circuit. The outstanding motions, however, have been pending too long to await further guidance.

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market participants having a counter-risk position. *See Bilski II*, 130 S. Ct. at 3223–24. The Supreme Court found the invention claimed a fundamental economic practice. *Id.* at 3231. Similarly, a district court found a business method directed to allowing Internet users to view copyrighted material free of charge in exchange for viewing certain advertisements to be an unpatentable abstract idea. *See Ultramercial*, 2010 U.S. Dist. LEXIS 93453 at *17. The district court found the method abstract because at its core sat "the basic idea that one can use advertisement as an exchange or currency." *Id.*

CLS argues that Alice's method claims are directed to unpatentable processes for exchanging an obligation based on a mathematical algorithm, as well as the abstract idea of transformation or manipulation of legal obligations or business risks. CLS Reply 23. The Court need not consider whether the methods, at heart, claim nothing more than an algorithm because the Court agrees that the methods are directed to an abstract idea of employing an intermediary to facilitate simultaneous exchange of obligations in order to minimize risk. This is a basic business or financial concept much like those struck down in *Bilski II* or *Ultramercial*. At the heart of these claims is the fundamental idea of employing a neutral intermediary to ensure that parties to an exchange can honor a proposed transaction, to consummate the exchange simultaneously to minimize the risk that one party does not gain the fruits of the exchange, and then irrevocably to direct the parties, or their value holders, to adjust their accounts or records to reflect the concluded transaction. Using an intermediary, which may independently maintain records or accounts on the parties to ensure each party has sufficient value or worth to complete a proposed exchange, as a way to guarantee that a transaction is ultimately honored by all parties, thereby minimizing risk, remains a fundamental, abstract concept.

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To demonstrate, independent claim 27 of the '510 Patent requires the supervisory institution to maintain an account for a first party which is independent of an account held by an exchange institution, to facilitate an exchange of obligations if the first party's account value (however defined) does not drop below zero, and to conduct a transaction with the exchange institution that is irrevocable at the end of a period to reflect the exchange of obligations made. *See* '510 Patent, claim 27. Essentially, this claim is directed to the abstract and fundamental concept of using an intermediary to guarantee an exchange. Similar to the invention in *Flook*, which was found merely to provide a formula for computing an alarm limit, *see Diehr*, 450 U.S. at 192 n.14, the invention here simply provides the formula, or manner, in which to use an electronic intermediary to exchange obligations as a way to hedge against the risk of loss. Independent claim 33 of the '479 Patent and independent claims 1, 61, 65, and 68 of the '510 Patent, each is directed as a whole to this same abstract concept.

Alice argues that the claimed methods "require the use of a computer and data storage unit programmed to perform a particular financial transaction, implement a concept in a tangible way with tangible, real world results – money is exchanged in the absence of counterparty risk." Alice Mem. 34. There may be no dispute that the methods claimed engender a practical result, but this fact alone does not rescue the claims from the realm of abstraction. Some abstract ideas, such as fundamental business concepts, although not patentable standing alone will nonetheless produce useful results when basically applied. *Cf. Bilski I*, 545 F.3d at 965 ("[T]he claimed process here as a whole is directed to the mental and mathematical process of identifying transactions that would hedge risk. The fact that the claim requires the identified transactions actually to be made does no more to alter the character of the claim as a whole."); *see also Diehr*, 450 U.S. at 192 n.14 (noting

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that the claims in *Flook* "did more than present a mathematical formula" but presented steps to

calculate an updated alarm limit and replace the outdated alarm limit for which there were a "broad

range of potential uses" in the petrochemical and oil refinery industries); *Ultramercial*, 2010 U.S.

Dist. LEXIS 93453 at *19 (stating that despite the Supreme Court coming to different conclusions

on subject matter eligibility in *Diehr* and *Bilski II*: "In both [cases], the claimed invention discloses

a real-world application of a mathematical formula. In both, a well-known or basic principle is

linked to its practical use."). It would seem logical that the concept and application of hedging in

the energy markets before the Supreme Court in *Bilski II* would produce practical and real world

results; however the Court did not focus on this point, but instead held the claims were "broad

examples" of a concept and the patent would ultimately preempt the use of the concept itself. *Bilski*

II, 130 S. Ct. at 3231. The fact that a claim produces practical results may inform the abstract

analysis, but it is not dispositive of subject matter eligibility.[13]

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[13] Alice does not argue that the identification of tangible, real-world applications is sufficient to satisfy the subject matter eligibility question. Yet, it is important to note that the "useful, concrete, and tangible result" test has been clearly disavowed by both the Federal Circuit and the Supreme Court. *See supra* note 9. An administrative patent judge, writing before the test was invalidated, noted that: "The decisions by the Court of Appeals for the Federal Circuit in *State Street Bank & Trust Co. v. Signature Financial Groups Inc.* [149 F.3d 1368 (1998)] and *AT&T Corp. v. Excel Communications, Inc.* [172 F.3d 1352 (1999)] have made it easier for the public to obtain patents covering computer implemented business-related inventions. In those decisions, the Court of Appeals for the Federal Circuit held that computer implemented business method-related inventions are deemed 'statutory' subject matter (subject matter that can be patented) under 35 U.S.C. § 101 if they have a 'practical application,' i.e., produce a 'useful, concrete and tangible result' . . . . This holding has had a profound effect on the growth of new patents and patent applications covering computer implemented business method inventions. The number of new applications of these types filed in Class 705 (designated as business and management data processing class) increased from 1370 in Fiscal Year 1998 to 2600 in Fiscal Year 1999 and to 7800 in Fiscal Year 2000. The number of patents issued from these types of applications increased from a total of 447 prior to 1986 to a total of 2,850 as of the end of Fiscal Year 1999." Chung K. Pak, Patenting E-Commerce Inventions: Perspective From an Administrative Patent Judge, 85 J. Pat. & Trademark Off. Soc'y 447, 448–49 (2003) (internal citations omitted).

A district court should instead focus on the extent to which the application of an abstract idea is specific and/or limited to determine whether an invention is patent eligible. Recently, the Federal Circuit reversed a district court's finding that a method for "rendering a halftone image of a digital image by comparing, pixel by pixel, the digital image against a blue noise mask" was unpatentable as directed to an abstract algorithm. *See Research Corp.*, 627 F.3d at 868. The Circuit found the invention was not abstract, in part, because it presented "functional and palpable applications in the field of computer technology" and addressed "a need in the art for a method of and apparatus for the halftone rendering of gray scale images in which a digital data processor is utilized in a simple and precise manner to accomplish the halftone rendering." *Id.* at 868–69. "Indeed, this court notes that inventions with specific applications or improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory language and framework of the Patent Act." *Id.* at 869.

An analysis of the preemptive power of a claim is inextricably linked with the question of whether the application of an abstract idea is specific or limited. "Pre-emption of all uses of a fundamental principle in all fields and pre-emption of all uses of the principle in only one field both indicate that the claim is not limited to a particular application of the principle." *Bilski I*, 545 F.3d at 957; *see also Accenture*, 691 F. Supp. 2d at 595 ("While it is not permissible to pre-empt the use of an intangible principle, an application of the principle may be patentable; the scope of the exclusion of others to practice or utilize the fundamental principle imparted by the claims must be examined.").[14] The abstract idea claimed by Alice's methods in claims 33 and 34 of the '479 Patent

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[14] *See also Bilski I*, 545 F.3d at 953 ("Patents, by definition, grant the power to exclude others from practicing that which the patent claims. *Diehr* can be understood to suggest that whether a claim is drawn only to a fundamental principle is essentially an inquiry into the scope of that

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and each claim of the '510 Patent effectively preempt the use of an electronic intermediary to

guarantee exchanges across an incredible swath of the economic sector. The *Cybersource* court

found the claims before it "broadly preempt the fundamental mental process of fraud detection using

associations between credit card numbers." *Cybersource*, 620 F. Supp. 2d at 1077. Taking note of

the fact that credit card transactions over the Internet have "become a staple of modern business,"

the court found the methods would "preempt the use of fundamental mental processes across an

extraordinarily large and important segment of the commercial system." *Id.* The same is true here.

The processes claimed by Alice employ a supervisory institution to serve as an

intermediary to exchange obligations, which may monitor the credit/debit accounts/records at the

parties' exchange institution, and when sufficient value is present, the supervisory institution

conducts the exchange of obligations and instructs the parties, or their value holding exchange

institutions, to adjust their accounts/records accordingly. The methods broadly claim the idea of

exchanging "obligations" by way of an intermediary. Although each claim should be considered

independently and as a whole, by looking to the dependent claims of '510 Patent one understands

the reach of the methods claimed. The dependent claims recite potential "obligations" as those that

arise from any transaction linked to a "share price," a "weather event," a "market event," or a

"currency exchange transaction,"[15] and explain that the exchange of obligations may represent the

transfer of or transaction in "shares in financial or physical assets," "a wager," "a commodity," or

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exclusion; i.e., whether the effect of allowing the claim would be to allow the patentee to pre-empt
substantially all uses of that fundamental principle. If so, the claim is not drawn to patent-eligible
subject matter.").

[15] *See* '510 Patent, col. 64:22 (Claim 2); *id.* col. 64:25 (Claim 3); *id.* col. 64:27 (Claim 4);
id. col. 64:61 (Claim 18) (respectively).

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"money for goods, services, promises, credits or warrants."[16] If patentable, these claims could preempt the use of an electronic intermediary, using a shadow credit and/or debit records, as a manner in which to exchange an infinite array of tangible and intangible representations of value.

The remaining dependent claims in the '510 Patent as a whole also speak to the type of entity that might be an "exchange institution"—i.e. a credit card company, a debit card company, a bank, or a guarantor,[17] or they set forth basic realities of exchanging financial obligations, such as the fact that various institutions might exist in different time zones or be domiciled in legally and/or geographically different countries. *See* '510 Patent, col. 64:62–63 (Claim 19); *id.* col. 65:56–57 (Claim 37). Rather than limit the invention reflected in the '510 Patent, the dependent claims illustrate how broadly the invention might sweep its monopoly across commerce. These dependent claims are, inter alia, broad examples of what tangible and intangible items might be exchanged and the financial and institutional value holders to be governed by the '510 Patent. The claims simply recite how an electronic intermediary can be used to effectuate an almost infinite array of exchanges in the modern financial world. Unlike the concrete and palpable blue noise mask and pixel-by-pixel comparison method which resulted in a higher quality halftone digital image all while using less processor power and memory space which was before the Federal Circuit in *Research Corp.*, *see* 627 F.3d at 865, Alice's method claims are hardly limited to "specific applications" of an fundamental concept. *Id.* at 869.

It is clear that "limiting an abstract idea to one field of use or adding token

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[16] *See* '510 Patent, col. 64:29–30 (Claim 5); *id.* col. 64:32 (Claim 6); *id.* col. 64:34 (Claim 7); *id.* col. 64:36–37 (Claim 8) (respectively).

[17] *See* '510 Patent, col. 64:47 (Claim 12); *id.* col. 64:49 (Claim 13); *id.* col. 64:51 (Claim 14); *id.* col. 64:55 (Claim 16) (respectively).

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postsolution components" does not make an abstract idea patentable. *Bilski II*, 130 S. Ct. at 3231; *see also Diehr*, 450 U.S. at 191 (holding that the limitation against patenting an abstract idea cannot be circumvented by "attempting to limit the use of the formula to a particular technological environment," or by adding "insignificant postsolution activity" to transform a principle into a process). Limiting the use of the unpatentable Pythagorean theorem by claiming it could be usefully applied to surveying techniques would not make the invention patentable, *see Bilski I*, 545 F.3d at 957 (citing to *Flook*, 437 U.S. at 590), no more than limiting the concept of hedging to the energy and commodities markets. *See Bilski II*, 130 S. Ct. at 3231; *see also Cybersource*, 620 F. Supp. 2d at 1077. The method claims before the Court are not limited to any particular industry, but are supposedly limited by the use of a computer. As financial transactions, and the maintenance of accounts and/or records on a party's value or wealth, are increasingly likely to be monopolized by electronic and computer implementation and storage, the fact these claims are implemented electronically fails to limit the methods. *See Benson*, 409 U.S. at 71–72 (explaining that the practical effect of granting patent protection would be patenting an abstract idea since the algorithm before that court "ha[d] no substantial practical application except in connection with a digital computer"); *see also Ultramercial*, 2010 U.S. Dist. LEXIS 93453 at *18. The method claims before the Court are not limited by electronic implementation, and in looking at the method claims as a whole they would serve to patent the fundamental and abstract concept itself. *See Benson*, 409 U.S. at 71-2.

Similar to *Bilski II*, in which the Supreme Court invalidated the dependent claims which purported to limit hedging to be "broad examples of how hedging can be used in commodities and energy markets," *Bilski II*, 130 S. Ct. at 3231, the dependent claims of the '510 Patent and claim 34 of the '479 Patent, each when considered as a whole, constitute broad examples of potential

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parties, institutions, obligations, and circumstances under which the exchange of obligations—each dependent claim is no more than an attempt to limit the abstract concept to a field of use or to limit the invention by adding token postsolution components.

Also, that the methods entail an irrevocable instruction, assumed to be electronic in nature, to require that exchange institutions adjust their accounts or records according to the exchange conducted by the supervisory institution is subsumed within the abstract idea itself, if not insignificant postsolution activity. *See Flook*, 437 U.S. at 590 ("The notion that post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process exalts form over substance."); *Bilski I*, 545 F.3d at 966 (noting that abstract hedging claims required "performing the post-solution step of consummating those transactions"). In claiming the abstract idea of using an intermediary to guarantee the exchange of obligations to minimize risk, the final action that the parties, or their account holders, be met with an irrevocable instruction to adjust their account or record to reflect the consummated transaction is no more an inherent and necessary step in the abstract idea, if not an obvious post-solution step.

The Court finds claims 33 and 34 of the '479 Patent and claims 1–75 of the '510 Patent invalid are not directed to patentable subject matter.[18] The Court gives Alice the broadest reasonable construction of claim terms for purposes of its conclusion, for a court can bypass construction if construing the claims is not a material issue in resolving the motion. *See National Presto Indus.*, 76 F.3d at 1189. We now move to the remaining system and product claims at issue.

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[18] While the Court presumes that claims 33 and 34 of the '479 Patent are implemented electronically, a finding that the claims require no computer implementation at all, a point CLS argues, would only bolster the Court's finding that the claims are abstract.

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B. Computer System & Product Claims

The claims of the '720 and '375 Patents represent system and product claims. CLS contends that Alice simply recasts its abstract method claims in a physical embodiment in an attempt to employ the draftsman's art to save these claims from falling within the fundamental principles exceptions. Alice counters that these claims clearly fall within the category of inventions protected by the Patent Act and that there is no controlling precedent of courts finding a machine, a physical object made of parts, to be unpatentable as abstract.

1. Statutory Category

The claims of the '720 and '375 Patents are directed to either a machine or a manufacture under § 101. A "machine" is a "a concrete thing, consisting of parts, or of certain devices and combination of devices." *Nuijten*, 500 F.3d at 1355 (quoting *Burr*, 68 U.S. at 570). A machine "includes every mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result." *Id.* (quoting *Corning v. Burden*, 56 U.S. 252, 267 (1854)). A manufacture, on the other hand, is one or more articles prepared "for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." *Id.* at 1356 (quoting *Chakrabarty*, 447 U.S. at 308). Machine and method claims differ: "A machine is a thing. A process [or method] is an act, or a mode of acting. The one is visible to the eye -- an object of perpetual observation. The other is a conception of the mind, seen only by its effects when being executed or performed." *Expanded Metal Co. v. Bradford*, 214 U.S. 366, 384 (1909) (citation omitted).

Each of the 84 claims in the '720 Patent is directed to a particular "data processing system" to enable an exchange of obligations. Every claim in the '720 Patent recites "a data storage

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unit having stored therein" information about shadow accounts and/or records, and a "computer, coupled to said data storage unit," that is "configured" to perform steps of exchanging obligations similar to those laid out in the asserted method claims.[19] As an example, independent claim 1 of the '720 Patent claims a data storage unit with stored information about a shadow credit and debit record that is independent of accounts held by an exchange institution, and which is coupled with a computer configured to receive a transaction, electronically adjust the shadow credit and/or debit record to effect the exchange of an obligation if the value of the shadow debit record does not fall below the value of the shadow credit record, and generate an irrevocable instruction to an exchange institution to adjust its record(s) accordingly. *See* '720 Patent, col. 65:42–61. Essentially, the independent claims of the '720 Patent claim a computer that is configured to perform methods of exchanging an obligation, such as claims 1, 28, 60, and 68, or they claim methods of facilitating a purchase between parties, such as claims 64 and 80.

Similarly claims 1–38 and 42–47 of the '375 Patent are directed to a particular "data processing system" which enables the exchange of obligations. As with the claims in the '720 Patent, claims 1–38 and 42–47 of the '375 Patent each requires "a data storage unit having stored therein" information about accounts or records, and a "computer, coupled to said data storage unit," that is "configured" to perform certain steps of effecting an exchange obligation.[20] In contrast to the '720 Patent claims, the '375 Patent systems additionally claim a computer configured to "receive a

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[19] *See* '720 Patent, col. 65:42–61 (Claim 1); *id.* col. 67:1–18 (Claim 28); *id.* col. 68:33–53 (Claim 60); *id.* col. 68:62–66 & col. 69:1–11 (Claim 64); *id.* col. 69:20–42 (Claim 68); *id.* col. 70:20–37 (Claim 80) (collectively, the six independent claims of the '720 Patent).

[20] *See* '375 Patent, col. 65:1–30 (Claim 1); *id.* col. 66:1–29 (Claim 14); *id.* col. 66:61–65 & col. 67:1–26 (Claim 26) (collectively, the three independent system claims of the '375 Patent).

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transaction" from a "first party device," a "second party device," and/or a "communications

controller." *See, e.g.*, '375 Patent, col. 65:4 (Claim 1); *id.* col. 65:62 (Claim 12); *id.* col. 66:3 (Claim

14). The first or second party devices represent, as an example, "communications hardware products

used by the stakeholders to communicate data or instructions to or from the processing units and are

also referred to as stakeholder input/output devices." Ginsberg Decl. ¶ 53. "These may be personal

computers [or] mini- or mainframe computers fitted with modems." *Id.* Separately, the

"communications controller" effects communications between the devices and the computer system

by performing communications coordination and/or by adding security processing for the

instructions. *Id.* ¶ 54; *see also* '375 Patent, col. 7:46–54. Therefore, claims 1–38 and 42–47 of the

'375 Patent add to the computer system claimed by the '720 Patent a mechanism by which parties

independently may input the transaction(s) they wish the computer system to effectuate.

Independent claim 39 and dependent claims 40 and 41 of the '375 Patent are directed

to a "computer program product" containing a particular program code. *See* '375 Patent, col. 68:5

(Claim 39); *id.* col. 68:36 (Claim 40); *id.* col. 68:38 (Claim 41). Each of these claims recites a

"computer readable storage medium" having "computer readable program code embodied in the

medium." *Id.* col. 65:5–7 (Claim 39). The parties appear to agree for the present that these claims

represent a computer readable medium containing software that instructs a computer how to submit

a transaction and allow a party to view information on the processing of the exchange of obligations

by the supervisory institution, which mimics the methods claimed in the '510 Patent. *See* CLS Mem.

35; Alice Mem. 25.

The Court first determines whether these claims fall within the statutory class of

inventions covered by § 101. At first glance, a computer is a concrete item made of parts that would

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appear to fit clearly within the statutory protection afforded by § 101 as a machine, *see Nuijten*, 500

F.3d at 1355, so that every claim of the '720 Patent and claims 1–38 and 42–47 of the '375 Patent

appear to fit within the § 101 categories.[21] Claims 39–41 of the '375 Patent are directed to a

computer program product. The body of claim 39, from which claims 40 and 41 depend, recites

"program code," which alone could be statutorily invalid as "an idea without physical embodiment,"

see Microsoft Corp. v. AT&T Corp., 550 U.S. 437, 449 (2007); however the preamble to claim 39

recites a computer readable storage medium containing a computer readable program. *See* '375

Patent, col. 65:5–7. A computer readable medium, such as a disk or hard drive, containing program

code could be considered either a manufacture or a machine under § 101.[22] *See Nuijten*, 500 F.3d

at 1355–56; *cf In re Beauregard*, 53 F.3d 1583 (Fed. Cir. 1995).

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[21] However, there is the possibility that if the '720 and '375 Patents system claims are only directed to a general purpose computer lacking specific programming, the general purpose computer claimed would not be considered a machine under § 101. *See* 35 U.S.C. § 101; *Alappat*, 33 F.3d at 1545 (holding a claim which read on a general purpose computer was a machine under § 101 because a "general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software" thereby creating a "new machine" to qualify as a statutorily patentable invention under § 101). Although no specific software or program code is explicitly recited in the claims of the '720 Patent or claims 1–38 or 42–47 of the '375 Patent, the claims do state that a computer is "configured" to perform the functions. Therefore, assuming a broad construction of the claims, the Court assumes for purposes of these motions that the computer systems claimed have been specifically programmed and statutorily qualify as an machine under § 101.

[22] The Board of Patent Appeals and Interferences recently found that a computer program recorded on a computer-readable medium qualified statutorily for patent protection. "Computer programs and data structures are deemed 'functional descriptive material,' which impart functionality when employed as a computer component. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized." *Ex Parte Comer*, No. 2009-006782, 2010 WL 3626532, *4 (B.P.A.I. Sept. 16, 2010).

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2. Abstract Idea Exception to Patentability

Assuming the claims of the '720 and '375 Patents are directed to machines or manufactures under § 101, the Court must still analyze these inventions under the exceptions for fundamental principles which apply to all four categories of § 101 patent eligible inventions. *See AT&T Corp. v. Excel Commc'ns*, 172 F.3d 1352, 1357–58 (Fed. Cir. 1999); *see also Benson*, 409 U.S. at 67–8; *In re Ferguson*, 558 F.3d 1359, 1363 (Fed. Cir. 2009).[23] The "specific question whether a machine represents nothing more than a law of nature, natural phenomenon, or abstract idea is unquestionably the correct one in light of *Bilski*." *Chamberlain Group, Inc. v. Lear Corp.*, No. 5-3449, 2010 U.S. Dist. LEXIS 124566, *80 n.13 (N.D. Ill. Nov. 24, 2010) (citing *Bilski II*, 130 S. Ct. at 3225); *see also id.* at *74–75.[24]

Alice holds up *State Street* to support its argument that its process and/or software

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[23] For instance, in *Alappat* the Federal Circuit also analyzed the machine claim before it under the fundamental principles exception to ensure that the claim did not simply recite a mathematical algorithm or an abstract idea. *See Alappat*, 33 F.3d at 1544. The Federal Circuit found the machine claim, as a whole, was not directed to an algorithm or abstract idea, in part by employing the "useful, concrete, and tangible result" test. *See id.* That the claim qualified as a machine statutorily, *see supra* note 21, was not determinative in the Circuit's analysis, however, of whether the claim was abstract. The Court reads the case to instruct that while programming a general purpose computer may be how a "machine" is adjusted to fit within the patent eligible categories of § 101, such programming does not immunize the claim from failing under the abstract idea analysis.

[24] "Labels are not determinative in § 101 inquiries. *Benson* applies equally whether an invention is claimed as an apparatus or process, because the form of the claim is often an exercise in drafting. Moreover, that the claimed computing system maybe a 'machine' within 'the ordinary sense of the word,' . . . is irrelevant." *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 927 F. Supp. 502, 511 (D. Mass. 1996), *rev'd on other grounds*, 149 F.3d 1368. The Federal Circuit in *State Street* faulted the district court's conclusion in its abstract analysis, not that the district court actually applied the abstract analysis to the respondent's method and machine claims. The Circuit noted that "although we do not make this determination here, the judicially created exceptions, i.e., abstract ideas, laws of nature, etc., should be applicable to all categories of statutory subject matter, as our own precedent suggests." *State Street*, 149 F.3d at 1372 n.1 (citations omitted).

claims are directed to patent eligible subject matter. In *State Street*, the Federal Circuit reviewed machine claims under the abstract analysis and ultimately found the claims were patentable because they satisfied the "useful, concrete, and tangible result." *See State Street*, 149 F.3d at 1373. The Federal Circuit concluded, "[t]he question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to–process, machine, manufacture, or composition of matter–but rather on the essential characteristics of the subject matter, in particular, its practical utility." *Id.* at 1375. In analyzing the *State Street* claims, the Circuit did not note any potential preemptive effects of the claims, but focused only on the results produced by the claims. However, the "useful, concrete, and tangible result" test has been thoroughly rejected, *see Bilski II*, 130 S. Ct. at 3221, at least partly because its application proved too liberal in filtering out abstract claims. *See id.* at 3232 n.1 (Stevens, J. concurrence); *id.* at 3259 (Breyer, J. concurrence) (noting the "useful, concrete, and tangible result" test would, if taken literally, allow claims to be patentable where the Supreme Court has held to the contrary (citing cases, including *Flook*) and that the test "preceded the granting of patents that ranged from the somewhat ridiculous to the truly absurd") (internal citations and quotation marks omitted).

In the instant matter, the Court follows the reasoning of the Supreme Court in *Bilski II*, which concentrated not on the usefulness or practicality of claims, but on whether claims are directed to a fundamental concept as demonstrated, as least in part, by their preemptive force. *See id.* at 3231. Just as the claims in *Bilski II* were not saved from the abstract exception because they may have nominally claimed a "process" under § 101, nor can Alice's system or product claims be saved only by the fact they may nominally recite a "computer" or "manufacture."

CLS argues that the language of Alice's system and method claims are essentially one

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and the same, merely replacing the term "supervisory institution" from the '510 Patent with an

unspecified "computer" in every claim of the '720 Patent and claims 1–38 and 42–47 of the '375

Patent. *See* CLS Mem. 34. Accordingly, CLS argues the system claims in the '720 and '375 Patents

represent nothing more than an attempt to recast an abstract method as tangible hardware to

circumvent the limitations on subject matter eligibility. *See id.* at 34. Alice acknowledges the

similarity, but disputes that the various claims are identical. *See* Ginsberg Decl. ¶ 52. The

similarities are immediately apparent, even if not entirely identical. As an example, system claim

68 of the '720 Patent mimics the language of method claim 68 of the '510 Patent language in that

the method steps are almost identical but the "supervisory institution" recited in method claim 68

of the '510 Patent is replaced by a "data processing system," or a computer, in the system claim.

Compare '720 Patent, col. 69:20–42, *with* '510 Patent, col. 67:38–41 & col. 68:1–19; *see also* CLS

Mem. 13.

The Court has found Alice's asserted method claims to be directed to an abstract

concept. The system claims of the '720 Patent represent merely the incarnation of this abstract idea

on a computer, without any further exposition or meaningful limitation. Although it is unsettled as

to when a claim to a machine or manufacture is abstract,[25] the Court concludes that the system claims

in the '720 Patent would preempt the use of the abstract concept of employing a neutral intermediary

to facilitate simultaneous exchange of obligations in order to minimize risk on any computer, which

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[25] *See, e.g., Ferguson,* 558 F.3d at 1367 (Newman, J., concurring) ("There are indeed many uncertainties remaining in this court's restructure of the legal framework of modern technology and its fruits. However, the potentially complex issues of when computers are *Bilski*-acceptable machines do not arise in the Ferguson claims. I agree that these issues require clarification, for uncertainty as to legal rights is as much a disincentive to commerce as is their deprivation. However, this case is not the appropriate vehicle for dictum of potentially large consequence.") (referring to *Bilski I,* 545 F.3d 943).

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is, as a practical matter, how these processes are likely to be applied. *Cf. Alappat*, 33 F.3d at 1544 ("Indeed, [machine] claim 15 as written is not 'so abstract and sweeping' that it would 'wholly pre-empt' the use of any apparatus employing the combination of mathematical calculations recited therein.") (quoting *Benson*, 409 U.S. at 68–72). Unlike the machine claim in *Alappat*, the '720 Patent claims, as written, would wholly preempt the use of the abstract concept in any computer. Despite the fact that the '720 Patent system claims and Alice's asserted method claims are directed to different patent eligible categories under § 101, their preemptive effect would be largely one and the same. As the Court finds the '720 Patent claims are directed to the same abstract concept as the method claims, the reasoning underlying the abstract determination on the method claims applies with equal force to the claims of the '720 Patent. *See supra* Part III(A)(3).

The impact of the '720 Patent on common and everyday financial transactions speaks to its preemptive effect. Independent claims 1, 27, 60, and 68 of the '720 Patent mirror the fundamental concepts claimed by the '510 Patent. System claim 64, on the other hand, essentially enables a purchase between a buyer and seller, in which the system recited maintains a shadow account for a buyer and seller independent of those held by a bank, and the computer is configured to receive a transaction, adjust the accounts of the buyer and seller to effectuate the purchase if the accounts have sufficient value, and to generate an irrevocable instruction to the bank(s) to adjust their account(s) accordingly. *See* '720 Patent, col. 68:62–66 & col. 69:1–11. Such a "system" is simply an electronic intermediary that maintains its own shadow accounts to guarantee and effect purchases between parties. Claim 67, which depends from claim 64, further entails means "for allowing said buyer to acquire an item from said seller, wherein the purchase relates to said item." *Id.* col. 69:17–19. Independent claim 80 of the '720 Patent is directed to the same basic concept of

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enabling a purchase by an electronic intermediary as claim 64, except it defines the stakeholders as a "first party" and a "second party" and refers to first or second accounts. *Id.* col. 70:20–37.

Chamberlain, a district court decision following *Bilski II*, well illustrates the issue here. The *Chamberlain* invention claimed a physical transmitter that sent out an encrypted signal to control an actuator (as part of a garage door opening system), which the court held was a machine under § 101. *See Chamberlain*, 2010 U.S. Dist. LEXIS 124566 at *73, 78–79. In analyzing the exception for fundamental principles, the court found the claims before it were not an attempt to patent a mere algorithm and that no preemption concerns were raised. *Id.* at *84. When viewed in the context of the entire claim, the algorithm was directed at a "physical product that is to be used for a specific purpose" and would not "preclude the use of the mathematical algorithms that operate within the transmitter for other purposes." *Id.* at *84–85. The court also noted that the physical transmitter was not simply insignificant extra-solution activity since "the machine, to the contrary, constitutes the very heart of the invention." *Id.* at 85.

The machine claims before the *Chamberlain* court stand in stark contrast to the '720 Patent claims before this Court. Here, preemption concerns of a basic concept across an unlimited field are preeminent. The system claims are not a specific and limited application of a general business concept, but instead seek to preempt the concept itself when employed by any computer coupled with a data storage unit. The system claims are no more limited than the method claims simply because they are directed to a data processing system. The effect of allowing these claims to be patentable would be to allow Alice "to pre-empt substantially all uses of th[e] fundamental principle." *Bilski I*, 545 F.3d at 953.

Further, the dependent claims of the '720 Patent only serve to limit the invention to

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a field of use and are no more than token postsolution components. *See Bilski II*, 130 S. Ct. at 3231.

The dependent claims merely demonstrate the all-encompassing nature of the steps, or methods, that

the '720 Patent system claims are intended to implement. As with the dependent claims of the '510

Patent, the dependent claims of the '720 Patent describe a plethora of possible transactions or

accounts that would be covered by the system,[26] what the "exchange institution" might be,[27] or

circumstances under which the exchanges might be effectuated.[28]

　　　　While not dispositive for this analysis, it is worthwhile to note that the dependent

claims of the '720 Patent recite details to flesh out the steps, parties, and circumstances under which

obligations are to be exchanged—mirroring the '510 Patent dependent claims—but do not further

describe or limit the claimed data processing system as a machine. Unlike the machine claims in

Chamberlain, the steps of exchanging an obligation (and not the computer system claimed) are the

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[26] *See, e.g.*, '720 Patent, col. 65:64–65 ("transaction linked to a share price") (Claim 2); *id.* col. 65:28 ("weather event") (Claim 3); *id.* col. 66:3 ("market event") (Claim 4); *id.* col. 66:5–6 ("transfer of shares in financial or physical assets") (Claim 5); *id.* col. 66:10 ("transfer of a commodity") (Claim 7); *id.* col. 66:13 ("money for goods, services, promises, credits or warrants") (Claim 8); *id.* col. 66:64–67 ("claim 1, further comprising means for allowing said party to acquire an item from another party, wherein the exchange obligation relates to said item") (Claim 27); *id.* col. 70:1–2 ("exchange obligation involves currency") (Claim 74).

[27] *See, e.g.*, '720 Patent, col. 66:22 ("a credit card company") (Claim 12); *id.* col. 66:24 ("a debit card company") (Claim 13); *id.* col. 66:26 ("bank") (Claim 14); *id.* col. 69:44 ("central bank") (Claim 69); *id.* col. 70:3–5 ("non-bank clearing house or depository") (Claim 75).

[28] *See, e.g.*, '720 Patent, col. 66:38–40 (where exchange institutions operate in different times zones) (Claim 19); *id.* col. 66:41–43 (where exchange institutions have different processing cycles) (Claim 20); *id.* col. 66:47–50 (where "said data storage unit has stored therein a balance for said shadow credit record and/or shadow record obtained from said exchange institution") (Claim 22); *id.* col. 70:41–42 (instruction is generated at the end of the day) (Claim 82).

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true "heart" of Alice's invention. *Cf. Chamberlain*, 2010 U.S. Dist. LEXIS 124566 at *85.[29] The

Court looks to what, at base, is claimed by the '720 Patent claims—and that is an abstract concept.

The Court agrees with CLS that, in these circumstances, "a computer system merely 'configured'

to implement an abstract method is no more patentable than an abstract method that is simply

'electronically' implemented." CLS Reply 31; *see also Kuno*, 2010 WL 5127425 at *10 (finding

machine and manufacture claims abstract and noting that "[i]n essence, these claims merely recite

a general purpose computing device intended to facilitate the future execution of the recited

[algorithms] similar to those in the independent method claims that we found to be ineligible under

§ 101").[30]

The Court also applies this analysis and result to system claims 1–38 and 42–47 of

the '375 Patent. Although these claims recite an additional component of allowing stakeholders an

ability to transmit requested transactions directly to the computer system via a "first party device,"

a "second party device," or a "communications controller,"[31] the claims simply indicate that the

stakeholders can interact with the computer system, without intermediaries, and that the computer

system itself will ultimately effect the exchange of obligations. That the parties can directly input

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[29] *See also* Ginsberg Decl. ¶ 52 (speaking of the '720 and '375 Patents, noting that "at a general level, the basic settlement operations could be performed without the aid of a computer if they were not so claimed").

[30] To be clear, the Court does not hold that Alice's process claims in the '720 Patent fail to recite patent eligible subject matter because they mimic the asserted method claims in the '479 and '510 Patents. The Court finds the '720 Patent process claims when considered as a whole to be unpatentable because, similar to the method claims they mimic, they are directed to an abstract concept.

[31] *See, e.g.*, '375 Patent, col. 65:4 (Claim 1); *id.* col. 65:62 (Claim 12); *id.* col. 66:3 (Claim 14) (respectively).

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desired transactions using modems, land line phones, a fax machine, or otherwise, *see* '375 Patent, col. 7:55–67 & col. 8:1–5, to reach a "communications controller" represents token "postsolution components" and fails to make the claims patentable. *See Bilski II*, 130 S. Ct. at 3231. The "fact that the claim requires the identified transactions actually to be made does no more to alter the character of the claim as a whole." *Bilski I*, 545 F.3d at 965.

The dependent claims at most attempt to limit the fundamental concept to a field of use, by defining the "obligations" that are to be exchanged, the conditions under which obligations are to be exchanged, and/or the respective parties and institutions to the transaction. At the heart of these claims is the same fundamental concept of employing a neutral intermediary to facilitate a simultaneous and irrevocable exchange of obligations in order to minimize risk. The system claims in the '375 Patent recite no more specific or limited application of the fundamental concept than the claims already addressed.

Lastly, the three program claims in the '375 Patent are also directed to the same abstract concept despite the fact they nominally recite a different category of invention under § 101 than the other claims asserted by Alice. Claim 39 recites "program code" to cause a computer to allow a party to send a transaction relating to "an exchange obligation arising from a currency exchange transaction between" a first and second party. '375 Patent, col. 68:10–12, 14. The program code also causes the computer to allow a party to view information relating to the "processing" of the obligation exchange by a supervisory institution. *Id.* col. 68:15. The processing that one can view by way of the program code constitutes the general steps of exchanging an obligation that arise in the other Patents, i.e., maintaining information about the parties' accounts, electronically adjusting the accounts to effect the exchange obligation, and generating an irrevocable

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instruction to the exchange institutions. *Id.* col. 68:17–35. CLS argues that claims 39–41 of the '375

Patent do no more than mirror method claim 68 of the '510 Patent, except that the computer program

allows a party, by computer, to send a transaction and view information relating to the method

claims. CLS Mem. 35. It is true that independent claim 39 recites as part of the claim a process

almost identical to a method claimed in the '510 Patent. *Compare* '375 Patent, col. 68:17–35, *with*

'510 Patent, col. 68:1–19.

To be sure, the application of an abstract idea does not render a claim unpatentable

under § 101, *see Diehr,* 450 U.S. at 187, however these claims seek to claim the fundamental

concept itself, and not a limited or specific application of the concept. Claims 39–41 of the '375

Patent allow a party to use a computer to submit a preferred transaction—the first and necessarily

inherent step in the fundamental concept of employing an intermediary to facilitate a simultaneous

and irrevocable exchange of obligations to minimize risk—and then to observe the processing, or

implementation, of the fundamental concept itself. The additional elements of programming to allow

a party to submit a transaction and view the exchange does little to mitigate the preemptive effect

of these claims on the fundamental concept. Moreover, dependent claim 40 does no more than

attempt to limit the invention to a field of use by confining the submitted "transaction" to one that

involves currency, *see* '375 Patent, col. 68:37, and claim 41 similarly attempts to limit the claim by

only allowing a party to view preauthorized information relating to the processing. *Id.* col. 68:38–41.

These two dependent claims represent no more than "broad examples" of how the fundamental

concept can be applied and implemented. *See Bilski II,* 130 S. Ct. at 3231.

IV. CONCLUSION

For the foregoing reasons, the Court will grant CLS's motion for summary judgment.

The Court finds claims 33 and 34 of the '479 Patent and each claim of the '510 Patent, '720 Patent, and '375 Patent to be directed to an abstract idea under the *Benson, Flook, Diehr,* and *Bilski* Supreme Court line of precedent. Accordingly, these claims are invalid as being directed to patent-ineligible subject matter under § 101 of the Patent Act. A memorializing Order accompanies this Memorandum Opinion.
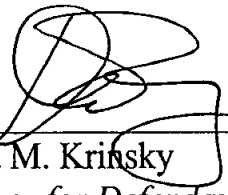
Date: March 9, 2011
                                        /s/
                                    _____
                                    ROSEMARY M. COLLYER
                                    United States District Judge

CERTIFICATE OF SERVICE

I, David M. Krinsky, counsel for appellant and a member of the Bar of this Court, certify that, on June 24, 2011, a copy of the attached Brief of Defendant-Appellant Alice Corporation Pty. Ltd. was hand-delivered to the Clerk and delivered via Federal Express to the following counsel:

Steven J. Glassman, Esq.
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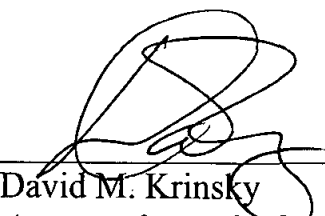I further certify that all parties required to be served have been served.

David M. Krinsky
Attorney for Defendant-Appellant
Alice Corporation Pty. Ltd.

June 24, 2011

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITATION, TYPEFACE REQUIREMENTS, AND TYPE STYLE REQUIREMENTS

1.   This brief complies with the type-volume limitation of Federal Rule of Appellate Procedure 32(a)(7)(B). The brief contains 12,199 words, excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(a)(7)(B)(iii) and Federal Circuit Rule 32(b).

2.   This brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of Appellate Procedure 32(a)(6). The brief has been prepared in a proportionally spaced typeface using Microsoft Word 2007 in 14-point Times New Roman font.

_____
David M. Krinsky
Attorney for Defendant-Appellant
Alice Corporation Pty. Ltd.

June 24, 2011